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Artists Past and Present

RANDOM STUDIES

BY

ELISABETH LUTHER CARY

Author of "*The Art of William Blake*," "*Whistler*," Etc.

ILLUSTRATED



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CONTENTS

	PAGE
I. ANTOINE LOUIS BARYE	1
II. THE ART OF MARY CASSATT	25
III. MAX KLINGER	37
IV. ALFRED STEVENS	49
V. A SKETCH IN OUTLINE OF JACQUES CALLOT	61
VI. CARLO CRIVELLI	81
VII. THE CASSEL GALLERY	95
VIII. FANTIN-LATOURE	109
IX. CARL LARSSON	119
X. JAN STEEN	131
XI. ONE SIDE OF MODERN GERMAN PAINTING	143
XII. TWO SPANISH PAINTERS	165

LIST OF ILLUSTRATIONS

DANS LA LOGE	<i>Frontispiece</i>	Facing Page
	<i>From a painting by Mary Cassatt</i>	2
PORTRAIT OF ANTOINE LOUIS BARYE	<i>From a painting by J. F. Millet</i>	2
LION DEVOURING A DOE		6
BULL THROWN TO EARTH BY A BEAR	<i>From a bronze by Barye</i>	6
A LIONESS	<i>From a bronze by Barye</i>	8
THE PRANCING BULL	<i>From a bronze by Barye</i>	10
PANTHER SEIZING A DEER	<i>From a bronze by Barye</i>	12
THE LION AND THE SERPENT	<i>From a bronze by Barye</i>	16
ASIAN ELEPHANT CRUSHING TIGER	<i>From a bronze by Barye</i>	20
CHILD RESTING	<i>From an etching by Mary Cassatt</i>	28
ON THE BALCONY	<i>From a painting by Mary Cassatt</i>	32

	Facing Page
WOMAN WITH A FAN	34
<i>From a painting by Mary Cassatt</i>	
BEETHOVEN	38
<i>From a statue in colored marble by Max Klinger</i>	
CASSANDRA	44
<i>From a statue in colored marble by Max Klinger</i>	
L'ATELIER	52
<i>From a painting by Alfred Stevens</i>	
PORTRAIT OF JACQUES CALLOT	68
<i>Engraved by Vosterman after the painting of Van Dyck</i>	
ST. DOMINIC	84
<i>From a panel by Carlo Crivelli</i>	
ST. GEORGE	86
<i>From a panel by Carlo Crivelli</i>	
PIETÀ	88
<i>From a panel by Carlo Crivelli</i>	
A PANEL BY CARLO CRIVELLI (a)	90
A PANEL BY CARLO CRIVELLI (b)	92
SASKIA	98
<i>From a portrait by Rembrandt</i>	
NICHOLAS BRUYNINGH	102
<i>From a portrait by Rembrandt</i>	
PORTRAIT OF MME. MAÎTRE	112
<i>From a painting by Fantin-Latour</i>	
MY FAMILY	120
<i>From a painting by Carl Larsson</i>	
A PAINTING BY CARL LARSSON	126

LIST OF ILLUSTRATIONS

ix

	Facing Page
PEASANT WOMEN OF DACHAUER	148
<i>From a painting by Leibl</i>	
FIDDLING DEATH	154
<i>From a portrait by Arnold Boecklin</i>	
THE SWIMMERS	166
<i>From a painting by Sorolla</i>	
THE BATH — JÁVEA	168
<i>From a painting by Sorolla</i>	
THE SORCERESSES OF SAN MILAN	170
<i>From a painting by Zuloaga</i>	
THE OLD BOULEVARDIER	172
<i>From a painting by Zuloaga</i>	
MERCEDES	174
<i>From a painting by Zuloaga</i>	

ARTISTS PAST AND PRESENT

I

ANTOINE LOUIS BARYE

AT the Metropolitan Museum of Art are two pictures by the Florentine painter of the fifteenth century called Piero di Cosimo. They represent hunting scenes, and the figures are those of men, women, fauns, satyrs, centaurs, and beasts of the forests, fiercely struggling together. As we observe the lion fastening his teeth in the flesh of the boar, the bear grappling with his human slayer, and the energy and determination of the creatures at bay, our thought involuntarily bridges a chasm of four centuries and calls up the image of the Barye bronzes in which are displayed the same detachment of vision, the same absence of sentimentality, the same vigor and intensity if not quite the same strangeness of imagination. It is manifestly unwise to carry the parallel very far, yet there is still another touch of similarity in the beautiful surfaces. Piero's fine, delicate handling of pigment is in the same manner of expression as Barye's exquisite manipulation of his metal after the casting, his beautiful thin patines that do not suppress but reveal sensitive

line and subtle modulation. We know little enough of Piero beyond what his canvases tell us. Of Barye we naturally know more, although everything save what his work confides of his character and temperament is of secondary importance, and he is interesting to moderns, especially as the father of modern animal sculpture, and not for the events of his quiet life.

Antoine Louis Barye, born at Paris September 15, 1796, died June 25, 1875, in the same year with Corot and at the same age. The circumstances under which he began his career have been told in detail by more than one biographer, but it would be difficult rightly to estimate the importance and singularity of his work without some review of them. His father was a jeweler of Lyons, who settled in Paris before Antoine was born, and whose idea of education for his son was to place him at less than fourteen with an engraver of military equipments from whom he learned to engrave on steel and other metals, and later with a jeweler from whom he learned to make steel matrixes for molding reliefs from thin metals. A certain stress has been laid on this lack of schooling in the conventional sense of the word, but it is difficult to see that it did much harm, since Barye, though he was not a correct writer of French, was a great reader, keenly intelligent in his analysis of the knowledge he gained from books, and with extraordinary power of turning it to his own



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PORTRAIT OF ANTOINE LOUIS BARYE
From a painting by J. F. Millet

uses. Such a mind does not seriously miss the advantages offered by a formal training, and it might fairly be argued that the manual skill developed at the work-bench was in the long run more valuable to him than the abstract knowledge which he might have acquired in school could possibly have been. Be that as it may, up to the time of his marriage in 1823 he had a varied apprenticeship. At sixteen he was drawn as a conscript and was first assigned to the department where maps in relief are modeled. Before he was twenty-one he was working with a sculptor called Bosio, and also in the studio of the painter, Baron Gros. He studied Lamarck, Cuvier and Buffon. He competed five times for the *Prix de Rome* at the Salon, once in the section of medals and four times in the section of sculpture, succeeding once (in the first competition) in gaining a second prize. He then went back to the jeweler's bench for eight years, varying the monotony of his work by modeling independently small reliefs of *Eagle and Serpent*, *Eagle and Antelope*, *Leopard*, *Panther*, and other animals.

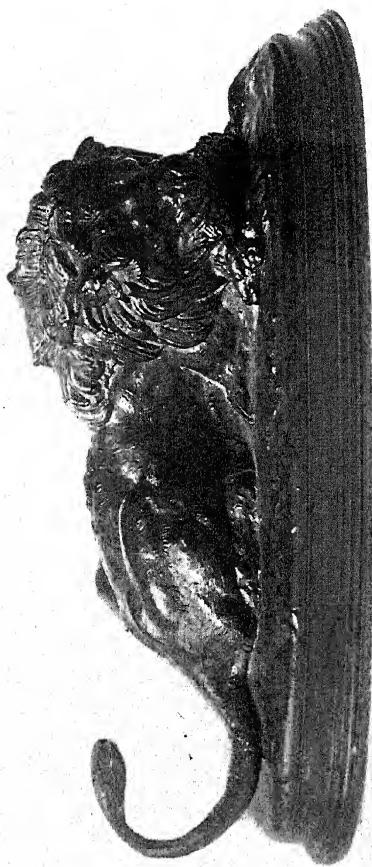
In 1831 he sent to the Salon of that year the *Tiger devouring a Gavia of the Ganges*, a beautiful little bronze, seven and a half inches high, which won a Second Medal and was bought by the Government for the Luxembourg. This was the beginning of his true career. In the same Salon was exhibited his *Martyrdom of St. Sebastian*, but

the powerful realism and energy of the animal group represented what henceforth was to be Barye's characteristic achievement, the realization, that is, of what the Chinese call the "movement of life;" the strange reality of appearance that is never produced by imitation of nature and that makes the greatness of art. The tiger clutches its victim with great gaunt paws, its eyes are fixed upon the prey, its body is drawn together with tense muscles, its tail is curled, the serpent is coiled about the massive neck of its destroyer with large undulating curves. The touch is everywhere certain, the composition is dignified, and the group as an exhibition of extraordinary knowledge is noteworthy.

A lithograph portrait of Barye by Gigoux, made at about this time, shows a fine head, interested eyes, a firm mouth and a determined chin. His chief qualities were perseverance, scientific curiosity, modesty and pride, and that indomitable desire for perfection so rarely encountered and so precious an element in the artist's equipment. He was little of a talker, little of a writer, infinitely studious, somewhat reserved and cold in manner, yet fond of good company and not averse to good dinners. Guillaume said of him that he had the genius of great science and of high morality, which is the best possible definition in a single phrase of his artistic faculty. He had the kind of sensitiveness, or self-esteem, if you will, that fre-

quently goes with a mind confident of its merits, but not indifferent to criticism or sufficiently elevated and aloof to dispense with resentment. In 1832 he sent to the Salon his *Lion Crushing a Serpent*, and in 1833 he sent a dozen animal sculptures, a group of medallions and six water-colors. That year he was made chevalier of the Legion of Honour, but the following year nine groups made for the Duke of Orleans were rejected by the Salon jury, and again in 1836 several small pieces were rejected, although the *Seated Lion*, later bought by the government, was accepted. The reasons for the rejections are not entirely clear, but Barye was an innovator, and in the field of art the way of the innovator is far harder than that of the transgressor. Charges of commercialism were among those made against him, and he — the least commercial of men — took them deeply to heart. His bitterness assumed a self-respecting but an inconvenient and unprofitable form, as he made up his mind to exhibit thereafter only in his own workshop, a resolution to which he held for thirteen years. After the rejection of his groups in 1834 he happened to meet Jules Dupré, who expressed his disgust with the decision. "It is quite easy to understand," Barye replied, "I have too many friends on the jury." This touch of cynicism indicates the ease with which he was wounded, but it was equally characteristic of him that in planning his simple revenge

he hurt only himself. He did indeed refrain from sending his bronzes to the Salon and he did act as his own salesman, and the result was the incurrence of a heavy debt. To meet this he was obliged to sell all his wares to a founder who wanted them for the purpose of repeating them in debased reproductions. His own care in obtaining the best possible results in each article that he produced, his reluctance to sell anything of the second class, and his perfectly natural dislike to parting with an especially beautiful piece under any circumstances, did not, of course, work to his business advantage, although the amateurs who have bought the bronzes that came from his own refining hand have profited by it immensely. It would be a mistake, however, to think of him as a crushed or even a deeply misfortunate man. He simply was poor and not appreciated by the general public according to his merits. After 1850, however, he had enough orders from connoisseurs, many of them Americans, and also from the French government to make it plain that his importance as an artist was firmly established at least in the minds of a few. He sold his work at low prices which since his death have been trebled and quadrupled, in fact, some of his proofs have increased fifty-fold, but the fact that he was not overwhelmed with orders gave him that precious leisure to spend upon the perfecting of his work which, we may fairly assume, was worth more to him than money.



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LION DEVOURING A DOE
("LION DEVORANT UNE BICHE")



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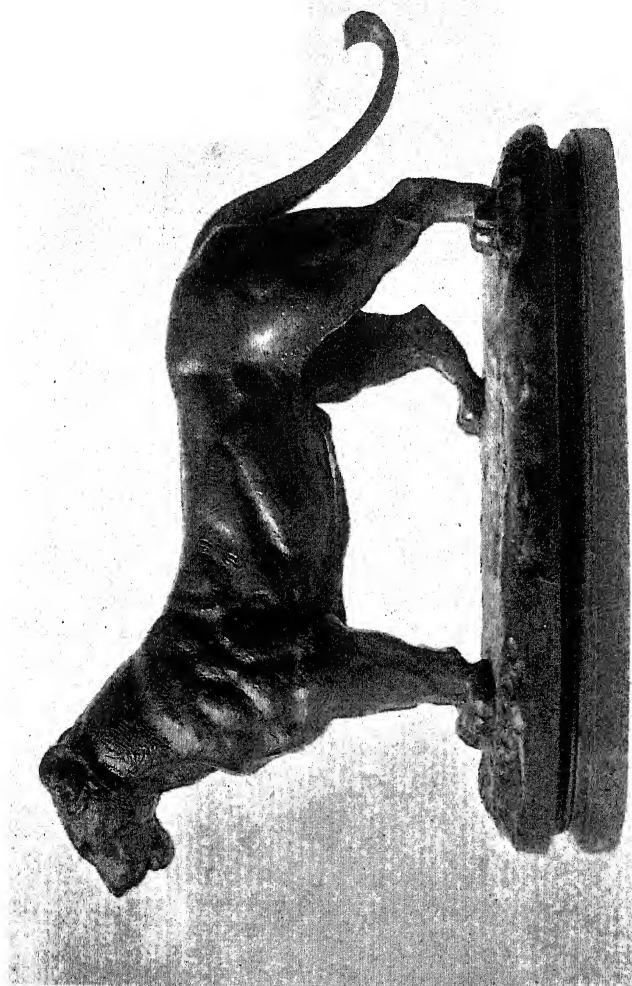
BULL THROWN TO EARTH BY A BEAR
("TAUREAU TERRASSÉ PAR UN OURS")

From a bronze by Barye

Nor was he entirely without honor in his own country. At the Universal Exposition of 1855 he received the Grand Medal of Honour in the section of artistic bronzes, and in the same year the Officer's Cross of Legion of Honour — a dignity that is said to have reached poor Rousseau only when he was too near death to receive the messengers. In 1868 Barye was made Member of the Institute, although two years earlier he had been humiliated by having his application refused. And from America, in addition to numerous proofs of the esteem in which he was held there by private amateurs, he received through Mr. Walters in 1875 an order to supply the Corcoran Gallery at Washington with an example of every bronze he had made. This last tribute moved him to tears, and he replied, "Ah! Monsieur Walters, my own country has never done anything like that for me!" These certainly were far from being trivial satisfactions, and Barye had also reaped a harvest of even subtler joys. One likes to think of him in Barbizon, living in cordial intimacy with Diaz and Rousseau and Millet and the great Daumier. Here he had sympathy, excellent talk of excellent things, the company of artists working as he did, with profound sincerity and intelligence, and he had a chance himself to paint in the vast loneliness of the woods where he could let his imagination roam, and could find a home for his tigers and lions and bears studied in menageries and in

the *Jardin des Plantes*. It is pleasant also to think of him among the five and twenty *Amis du Vendredi* dining together at little wineshops on mutton and cheese and wine with an occasional pâté given as a treat by some member in funds for the moment. He was not above enthusiasm for "*un certain pâté de maquereau de Calais*" and he was fond of the theater and of all shows where animals were to be seen. It is pleasantest of all to think of him at his work, the beauty of which he knew and the ultimate success of which he could hardly have doubted.

In what does the extraordinary quality of this work consist? The question is not difficult to answer, since, like most of the truly great artists, Barye had clear-cut characteristics among which may be found those that separate him from and raise him above his contemporaries. Scientific grasp of detail and artistic generalization are to be found in all his work where an animal is the subject, and this combination is in itself a mark of greatness. If we should examine the exceptionally fine collection of Barye bronzes belonging to the late Mr. Cyrus J. Lawrence, and consisting of more than a hundred beautiful examples, or the fine group in the Corcoran Gallery at Washington, we should soon learn his manner and the type established by him in his animal subjects. In the presence of so large a number of the works of a single artist, certain features common to the



From the collection of the late Cyrus J. Lawrence, Esq.

A LIONESS
From a bronze by Barye

whole accomplishment may easily be traced. One dominating characteristic in this case is the ease with which the anatomical knowledge of the artist is worn. Even in the early bronzes the execution is free, large, and quite without the dry particularity that might have been expected from a method the most exacting and specific possible. Barye from the first went very deeply into the study of anatomy, examining skeletons, and dissecting animals after death to gain the utmost familiarity with all the bones and muscles, the articulations, the fur and skin and minor details. His reading of Cuvier and Lamarck indicates his interest in theories of animal life and organism. He took, also, great numbers of comparative measurements that enabled him to represent not merely an individual specimen of a certain kind of animal, but a type which should be true in general as well as in particular. He would measure, for example, the bones of a deer six months old and those of a deer six weeks old, carefully noting all differences in order to form a definite impression of the normal measurements of the animal at different ages. He made comparative drawings of the skulls of cats, tigers, leopards, panthers, the whole feline species, in short, seeking out the principles of structure and noting the dissimilarities due to differences in size. He made innumerable drawings of shoulders, heads, paws, nostrils, ears, carefully recording the

dimensions on each sketch. Among his notes was found a minute description of the characteristic features of a blooded horse.

He was never content with merely an external observation of a subject when he had it in his power to penetrate the secrets of animal mechanism. He first made sketches of his subjects, of course, but frequently he also modeled parts of the animal in wax on the spot to catch the characteristic movement. His indefatigable patience in thus laying the groundwork of exact knowledge suggests the thoroughness of the old Dutch artists. He followed, too, the recommendation of Leonardo — so dangerous to any but the strongest mind — to draw the parts before drawing the whole, to “learn exactitude before facility.”

A story is told of a visit paid him by the sculptor Jacquemart: “I will show you what I have under way, just now,” said he to his friend, and looking about his studio for a moment, drew out a couple of legs and stood them erect. After a few seconds of puzzled thought he remembered the whereabouts of the other members, and finally drew out the head from under a heap in a corner. And the statue once in place was conspicuous for its fine sense of unity. It was not, of course, this meticulous method, but the use he made of it, that led Barye to his great results. His mind was strengthened and enriched by every fragment of knowledge with which he fed it. It all went



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THE PRANCING BULL
("TAUREAU CABRÉ")
From a bronze by Barye

wholesomely and naturally to the growth of his artistic ideas, and he does not appear to have been interested in acquiring knowledge that did not directly connect itself with these ideas. By his perfect familiarity with the facts upon which he built his conceptions he was fitted to use them intelligently, omit them where he chose, exaggerate them where he chose, minimize them where he chose. They did not fetter him; they freed him; and he could work with them blithely, unhampered by doubts and inabilities. It is most significant both of his accuracy and his freedom that in constructing his models he dispensed with the rigid iron skeleton on which the clay commonly is built. Having modeled the different parts of his composition, he brought them together and supported them from the outside by means of crutches and tringles after the fashion of the boat builders, thus enabling himself to make alterations, corrections and revisions to the very end of his task. The definitive braces were put in place only at the moment of the molding in plaster.

For small models he preferred to use wax which does not dry and crack like the clay. He also sometimes covered his plaster model with a layer, more or less thick, of wax, upon which he could make a more perfect rendering of superficial subtleties. Occasionally, as in the instance of *The Lion Crushing the Serpent*, cast by Honoré Gonon, he employed the process called *à cire perdue*, in

which the model is first made in wax, then over it is formed a mold from which the wax is melted out by heat. The liquid bronze is poured into the matrix thus formed, and when this has become cold the mold is broken off, leaving an almost accurate reproduction of the original model, which is also, of course, unique, the wax model and the mold both having been destroyed in the process. Upon his *patines* he lavished infinite care. Theodore Child has given an excellent description of the difference between this final enrichment of a bronze as applied by a master and the *patine* of commerce "The ideal *patine*," he says, "is an oxydation and a polish, without thickness, as it were, a delicate varnish or glaze, giving depth and tone to the metal. Barye's green *patine* as produced by himself has these qualities of lightness and richness of tone, whereas the green *patine* of the modern proofs is not a *patine*, not an oxydation, but an absolute application of green color in powder, a *mise en couleur*, as the technical phrase is. In places this *patine* will be nearly a millimeter thick and will consequently choke up all delicate modeling, soften all that is sharp, and render the bronze dull, *mou*, heavy. To produce Barye's fine green *patine*, requires time and patience, and for commercial bronze is impracticable. Barye, however, was never a commercial man. When a bronze was ordered he would never promise it at any fixed date; he would ask for one or two or three



PANTHER SEIZING A DEER
From a bronze by Barye

months; 'he did not know exactly, it would depend on how his *patine* came.'"

His patines are by no means all green; some of them are almost golden in their vitality of color — the "*patine médaillé*," as in *The Walking Deer*, which is a superb example; some are dark brown approaching black. The most beautiful in color and delicacy which I have seen is that on Mr. Lawrence's *Bull Felled by a Bear* (*Taureau terrassé par un ours*), a bronze which seems to me in many particulars to remain a masterpiece unsurpassed by the more violent and splendid later works. Another remarkable example of the effect of color possible to produce by a *patine* is furnished by the *Lion Devouring a Doe* (*Lion dévorant une biche*), dated 1837. The green lurking in the shadows and the coppery gleam on the ridge of the spine, the thigh, and the bristling mane, the rich yet bright intermediate tones, give a wonderful brilliancy and vitality to the magnificent little piece in which the ferocity of nature and the charm and loveliness of art are commingled. In his interesting book on Barye, published by the Barye Monument Association, Mr. De Kay has referred to this work as an example of Barye's power to reproduce the horrible and to make one's blood run cold with the ferocity of the destroying beast. It seems to me, however, that it is one of the pieces in which Barye's power to represent the horrible without destroying the

peace of mind to be found in all true art, is most obvious. With his capacity for emphasizing that which he wishes to be predominant in his composition he has brought out to the extreme limit of expression the strength of the lion and its savage interest in its prey. The lashing tail, the wrinkled nose, the concentrated eyes are fully significant of the mood of the beast, and were the doe equally defined the effect would be disturbing. But the doe, lying on the ground, is treated almost in bas-relief, hardly distinguishable against the massive bulk of its oppressor. The appeal is not to pity, but to recognition of the force of native instincts. Added to this is the beauty, subtly distinguished and vigorously rendered, of the large curves of the splendid body of the lion. Even among the superb later pieces it would be difficult to find one with greater beauty of flowing line and organic composition.

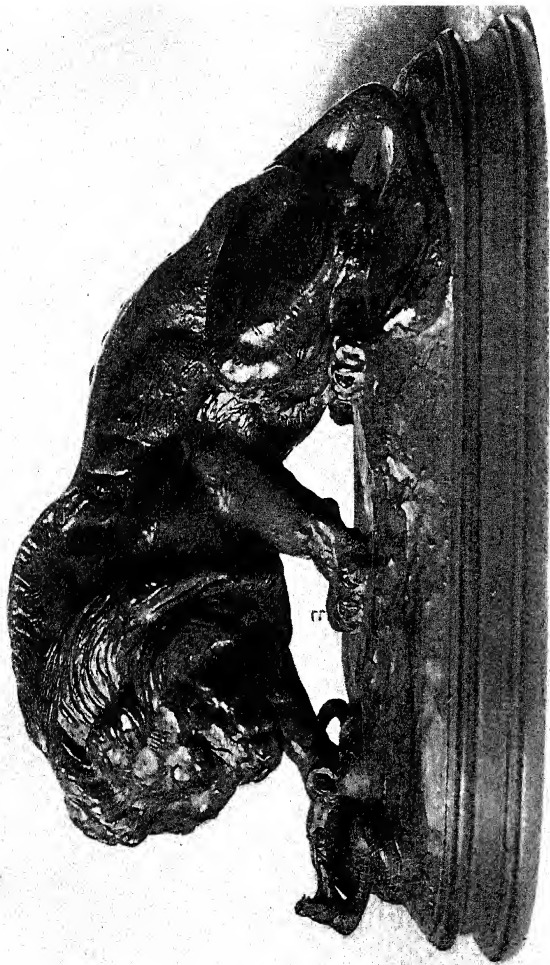
In the illustration we can see the general contour from one point of view, but we cannot see the rhythm of the curves balancing and repeating each other from the tip of the uplifted tail to the arch of the great neck. Nor is a particle of energy sacrificed to these beautiful contours. The body is compact, the head large and expressive of power, the thick paws rest with weight on the ground. There is none of the pulling out of forms so often employed to give grace and so usually suggestive of weakness. The composition is at once absolutely graceful and eloquent

of immense physical force. In the *Panther Seizing a Deer* (*Panthère saississant un Cerf*), one of the largest of the animal groups, we have again the characteristic double curves, the fine play of line, and the appropriate fitting of the figures into a long oval, and also the minimizing of the cruelty of the subject by the reticent art with which it is treated. We see clearly enough the angry jaws, the curled tail, the weight of the attacking beast falling on the head of its victim, dragging it toward the ground. Nothing is slighted or compromised. We see even the gash in the flesh made by the panther's claws and the drops of blood trickling from the wound. But we have to thank Barye's instinct for refined conception that these features of the work do not claim and hold our attention which is absorbed by the vital line, the gracious sweep of the contours, the lovely surface, and the omission of all irrelevant and unreasonable detail.

Many of Barye's subjects included the human figure and in a few instances the human figure alone preoccupied him. Occasionally he was very successful in this kind. The small silver reproduction of *Hercules Carrying a Boar* has the remarkable quality of easy force. The figure of Hercules is without exaggerated muscles, is normally proportioned and quietly modeled. His burden rests lightly on his shoulders, and his free long stride indicates that the labor is joy. This is the ancient, not the modern

tradition, and the little figure corresponds, curiously enough, with one of the male figures in the Piero di Cosimo mentioned at the beginning of this article. In the latter case the strong man is engaged in combat with a living animal, but he carries his strength with the same assurance and absence of effort in its exercise. Barye, however, does not always give this happy impression when he seeks to represent the human figure. If we compare, for example, the bronze made in 1840 for the Duke of Montpensier (*Roger Bearing off Angelica on the Hippogriff*) with any of the animal groups of that decade or earlier, we can hardly fail to be amazed at the lack of unity in the composition and the distracting multiplicity of the details. If we compare the *Hunt of the Tiger* with the *Asian Elephant Crushing Tiger* the great superiority of the latter in the arrangement of the masses, the dignity of the proportions, and in economy of detail, is at once evident. The figures of the four stone groups on the Louvre, however, have a certain antique nobility of design and withal a naturalness that put them in the first class of modern sculpture, I think.

One point worthy of note in any comparison between Barye's animals and his human beings is the intensity and subtlety of expression in the former and the absence of any marked expression in the latter. His men are practically masked. No passion or emotion makes its



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THE LION AND THE SERPENT
("LION AU SERPENT")
From a bronze by Barye

impression on their features. Even their gestures, violent though they may be, seem inspired from without and not by the impulse of their own feelings. His animals on the contrary show many phases of what must be called, for lack of a more exact word, psychological expression. A striking instance of this is found in the contrast between the sketch for *The Lion Crushing the Serpent* and the finished piece. In the sketch there is terror in the lion's face, his paw is raised to strike at the reptile, his tail is uplifted and lashing, the attitude and expression are those of terror mingled with rage and the serpent appears the aggressor. In the finished bronze the lion is calmer and in obvious possession of the field. The fierce claws pushing out from their sheathing, the eyes that seem to snarl with the mouth, the massive paw resting on the serpent's coiled body combine to give a subtle impression of certain mastery, and the serpent is unquestionably the victim and defendant in the encounter. It is by such intuitive reading of the aspect of animals of diverse kinds, that Barye awakens the imagination and leads the mind into the wilderness of the untamed world. He is perhaps most himself when depicting moods of concentration. The fashion in which he gathers the great bodies together for springing upon and holding down their prey is absolutely unequaled among animal sculptors. His mind handled monumental compositions with greater success, I think,

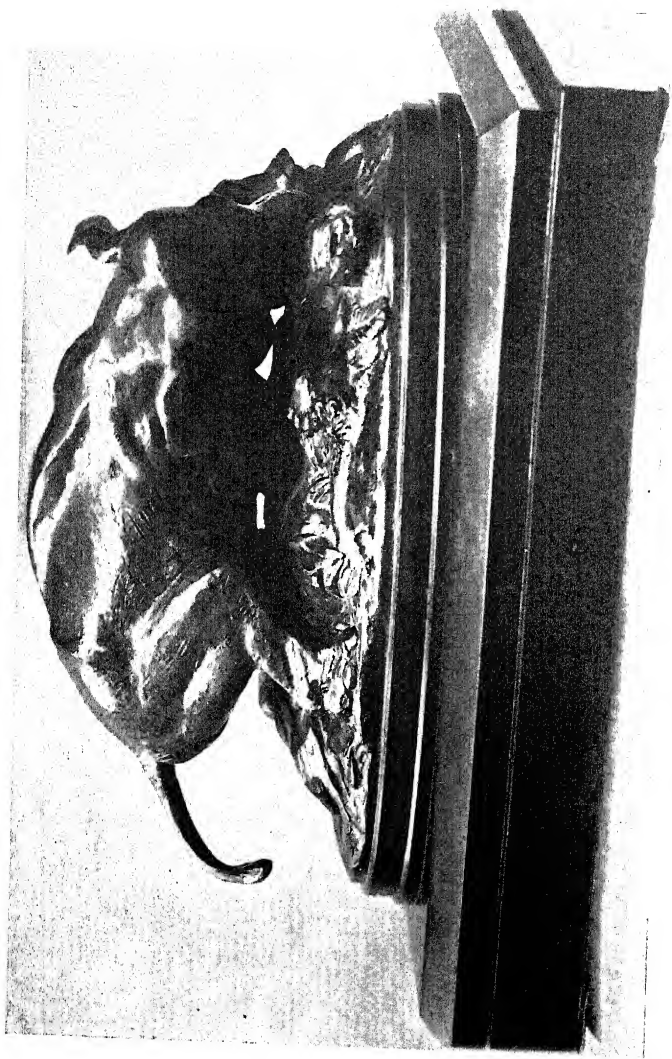
than compositions of the lighter type in which the subject lay at ease or exhibited the pure joy of living which we associate with the animal world.

Two exceptions to this statement come, however, at once to my mind — the delightful *Bear in his Trough* and the *Prancing Bull*. The former is the only instance I know of a Barye animal disporting itself with youthful irresponsibility, and the innocence and humor of the little beast make one wish that it had not occupied this unique place in the list of Barye's work. The *Prancing Bull* also is a conception by itself and one of which Barye may possibly have been a little afraid. With his extraordinary patience it is not probable that he had the opposite quality of ability to catch upon the fly, as it were, a passing motion, an elusive and swiftly fading effect. But in this instance he has rendered with great skill the curvetting spring of the bull into the air and the lightness of the motion in contrast with the weight of the body. This singular lightness or physical adroitness he has caught also in his representation of elephants, the *Elephant of Senégál Running*, showing to an especial degree the agility of the animal despite its enormous bulk and ponderosity.

While Barye's most important work was accomplished in the field of sculpture, his merits as a painter were great. His devotion to the study of structural expression was too stern to permit him to lapse into mediocrity, whatever

medium he chose to use, and the animals he created, or re-created, on canvas are as thoroughly understood, as clearly presented, as artistically significant as those in bronze. With every medium, however, there is, of course, a set of more or less undefinable laws governing its use. Wide as the scope of the artist is there are limits to his freedom, and if he uses water-color, for example, in a manner which does not extract from the medium the highest virtue of which it is capable he is so much the less an artist. It has been said of Barye that his paintings were unsatisfactory on that score. About a hundred pictures in oil and some fifty water-colors have been put on the list of his works. Mr. Theodore Child found his execution heavy, uniform, of equal strength all over, and of a monotonous impasto which destroys all aerial perspective. I have not seen enough of his painting in oils either to contradict or to acquiesce in this verdict; but his water-colors produce a very different impression on my mind. He uses body-color but with restraint and his management of light and shade and his broad, free treatment of the landscape background give to his work in this medium a distinction quite apart from that inseparable from the beautiful drawing. In the painting that we reproduce the soft washes of color over the rocky land bring the background into delicate harmony with the richly-tinted figure of the tiger with the effect of variety in unity

sought for and obtained by the masters of painting. The weight and roundness of the tiger's body is brought out by the firm broad outline which Barye's contemporary Daumier is so fond of using in his paintings, the interior modeling having none of the emphasis on form that one looks for in a sculptor's work. In his paintings indeed, even more than in his sculpture, Barye shows his interest in the psychological side of his problem. Here if ever he sees his subject whole, in all its relations to life. The vast sweep of woodland or desert in which he places his wild creatures, the deep repose commingled with the potential ferocity of these creatures, their separateness from man in their inarticulate emotions, their inhuman passions, their withdrawn powerfully realized lives, their self-sufficiency, their part in nature — all this becomes vivid to us as we look at his paintings and we are aware that the portrayal of animal life went far deeper with Barye than a mere anatomical grasp of his subject. Corot did not find his tigers sufficiently poetic and altered, it is said, the tiger drawn for one of his own paintings until he succeeded in giving it a more romantic aspect. Barye's poetry, however, was the unalterable poetry of life. He found his inspiration in realities but that is not to say that his realities were external ones. He excluded nothing belonging to the sentiment of his subject and comparison of his work with that of other animal sculptors and painters



ASIAN ELEPHANT CRUSHING TIGER
From a bronze by Barye

deepens one's respect for the penetrating insight with which he sought his truths.

Since Barye's death and the great increase in the prices of his work, many devices have been used to sell objects bearing his name, but not properly his work. For example, he produced for the city of Marseilles some objects in stone (designed for the columns of the gateway), which were never done in bronze; since his death these have been reduced in size and produced in bronze as his work. Works of the younger Barye signed by the great name are also confused with those of the father. Further still, to the confusion of inexperienced collectors, the bronzes of Méne, Fratin, and Cain, all artists of importance, but hardly increasing fame, have had the signatures erased and that of Barye substituted. It is therefore inadvisable to attempt at this date the collection of Barye's bronzes without special knowledge or advice. The great collections of early and fine proofs have been made. At the sale of his effects after his death the models with the right of reproduction were sold, and in many instances these modern proofs are on the market bearing the name of Barye, with no indication of their modernity. Some of these are so cleverly done that great knowledge is required to detect them, and if they were sold for a moderate price, would be desirable possessions. Certain dealers frankly sell a modern reproduction as modern and at an

appropriate price, but I know of one only, M. Barbédienne, who puts a plaque with his initials on each piece produced by him.

During Barye's lifetime he had, however, in his employ, a man named Henri, who possessed his confidence to a full degree. A few pieces are found with the initial of this man, showing that they were done under his supervision and not that of Barye, but whether before or after the death of the latter is not yet determined.

THE ART OF MARY CASSATT

II

THE ART OF MARY CASSATT

SOME fifteen years ago, on the occasion of an exhibition in Paris of Miss Cassatt's work a French critic suggested that she was then, perhaps, with the exception of Whistler, "the only artist of an elevated, personal and distinguished talent actually possessed by America." The suggestion no doubt was a rash one, since, as much personal and distinguished work by American artists never leaves this country, the data for comparison must be lacking to a French critic; but it is certainly true that, like Whistler, Miss Cassatt early struck an individual note, looked at life with her own eyes, and respected her intellectual instrument sufficiently to master it to the extent, at least, of creating a style for herself. Born at Pittsburgh, Pennsylvania, she studied first at the Philadelphia Academy, and later traveled through Spain, Italy, and Holland in search of artistic knowledge and direction. In France she came to know the group of painters including Monet, Renoir, Pissarro and Degas, and especially influenced by the work of Degas, she turned to him for

the counsel she needed, receiving it in generous measure. It was a fortunate choice, the most fortunate possible, if she wished to combine in her art the detached observation characteristic in general of the Impressionist school with a passionate pursuit of all the subtlety, eloquence and precision possible to pure line. The fruit of his influence is to be found in the technical excellence of her representations of life, the firmness and candor of her drawing, her competent management of planes and surfaces, and the audacity with which she attacks difficult problems of color and tone. The extreme gravity of her method is the natural result of working under a master whose intensity and austerity in the pursuit of artistic truth are perhaps unequaled in the history of modern art.

Her choice of subject is not, however, the inspiration of any mind other than her own. She has taken for the special field in which to exercise her vigorous talent that provided by the various phases of the maternal relation. Her wholesome young mothers with their animated children, comely and strong, unite the charm of great expressiveness with that of profoundly scientific execution. The attentive student of art is well aware how easily the former quality unsupported by the latter may degenerate into the cloying exhibition of sentiment, and is equally aware of the sterility of the latter practised for itself alone.

With expressiveness for her goal and the means of rendering technical problems for her preoccupation, Miss Cassatt has arrived at hard-earned triumphs of accomplishment. One has only to turn from one of her recently exhibited pictures to another painted ten or twelve years ago to appreciate the length of the way she has come. The earlier painting, an oil color, is of a woman in a striped purple, white, and green gown, holding a half-naked child, who is engaged in bathing its own feet, with the absorbed expression on its face common to children occupied with such responsible tasks. The brickly flesh tints of the faces and hands, and the greenish half-tones of the square little body are too highly emphasized, but a keen perception of facts of surface and construction is obvious in the well-defined planes of the child's anatomy, in the foreshortened, thin little arm pressing firmly on the woman's knee and in the stout little legs, hard and round and simply modeled. There is plenty of truth in the picture, but in spite of an almost effective effort toward harmony of color, it lacks what the critics call "totality of effect." The annotation of the various phenomena is too explicit, the values are not finely related, and there is little suggestion of atmosphere.

In the later picture this crudity is replaced by a beautiful fluent handling and the mystery of tone. The subject is again a woman and child, the latter just out of its

bath, its flesh bright and glowing, its limbs instinct with life and ready to spring with uncontrollable vivacity. The modeling of the figures is as elusive as it is sure, and in the warm, golden air by which they seem to be enveloped, the well-understood forms lose all suggestion of the hardness and dryness conspicuous in the early work. Another recent painting of a kindred subject, *Le lever de bébé*, shows the same synthesis of detail, the same warmth and richness of tone, the same free and learned use of line. Obviously, Miss Cassatt has come into the full possession of her art and is no longer constrained by the struggle, sharp and hard as it must have been, with her exacting method — a method that has not at any time permitted the sacrifice of truth to charm. Since art is both truth and charm, record and poetry, there is a great satisfaction in watching the flowering of a positive talent, after the inevitable stages of literalism are passed, into the beauty of intelligent generalization. In all the later work there is the important element of ease, a certain graciousness of style, that enhances to a very great degree the beauty of the serious, dignified canvases. And from the beginning these have shown the admirable qualities of serenity and poise. There is no superficiality or pettiness about these homely women with their deep chests and calm faces, peacefully occupying themselves with their sound, agreeable children. The air of health, of



CHILD RESTING
From an etching by Mary Cassatt

fresh and normal vigor, is the characteristic of the chosen type, and lends a suggestion of the Hellenic spirit to the modern physiognomies.

If, however, in her technique and in the feeling of quietness she conveys, Miss Cassatt recalls the classic tradition, she is intensely modern in her choice of natural, unhackneyed gesture, and faces in which individuality is strongly marked and from which conventional beauty is absent. Occasionally, as in the picture shown at Philadelphia in 1904, and in the fine painting owned by Sir William C. Van Horne, we have a face charming in itself and modeled in a way to bring out its refinement, but in the greater number of instances the rather heavy and imperfect features of our average humanity are reproduced without compromise, with even a certain sense of triumph in the beautiful statement of sufficiently ugly facts and freedom from a fixed ideal.

Nothing, for example, could be less in the line of academic beauty than the quiet bonneted woman in the opera-box shown at the Pennsylvania Academy in 1907. She has her opera-glass to her eyes and her pleasant refined profile is cut sharply against the light balustrade of the balcony. Other figures in adjoining boxes are mere patches of color and of light and shade, telling, nevertheless, as personalities so acutely are the individual values perceived and discriminated. The color is personal and

interesting, the difficult perspective of the curving line of boxes is mastered with amazing skill; the fidelity of the drawing to the forms and aspects of things seen gives expression to even the inanimate objects recorded — and to painters who have tried it we recommend the subtlety of that simply modeled cheek! The whole produces the impression of solid reality and quick life and we get from it the kind of pleasure communicated not by the imitation but by the evocation of living truth. We note things that have significance for us for the first time — the fineness of the hair under the dark bonnet, the pressure of the body's weight on the arm supported by the railing, the relaxation of the arm holding the fan, and very clever painting by artists of less passionate sincerity takes on a meretricious look in contrast with this closeness of interpretation.

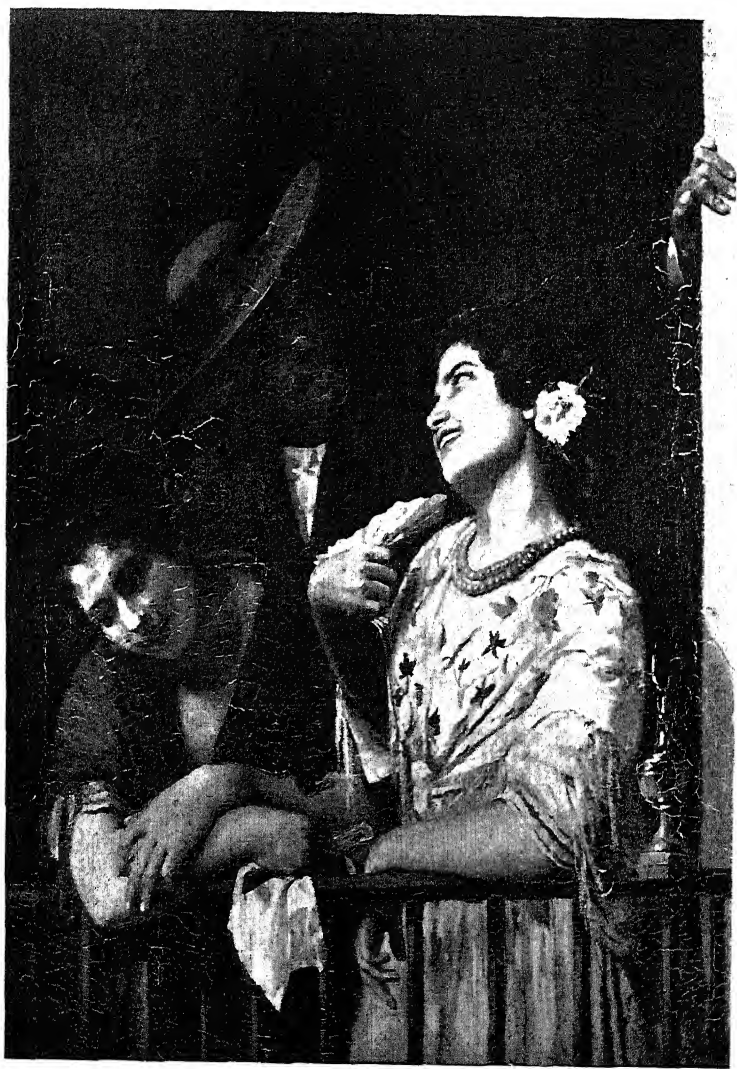
This, perhaps, is the chief distinction of Miss Cassatt's art — closeness of interpretation united to the Impressionist's care for the transitory aspect of things. She follows the track of an outline as sensitively if not as obviously as Ingres, and she exacts from line as much as it is capable of giving without interference with the expressiveness of the whole mass. She takes account of details with an unerring sense for their appropriateness. She selects without forcing the note of exclusion, and she thus becomes an artist of sufficiently general appeal to be un-

derstood at once. She is not merely intelligent, but intelligible; her art has no cryptic side. It is only the initiated frequenter of galleries who will pause to reflect how tremendously it costs to be so clear and plain.

In her etchings and drawings Miss Cassatt early arrived at freedom of handling. The more responsive medium gave her an opportunity to produce delightful studies of domestic life while she was still far from having attained an easy control of pigment and brush. Her dry-points, pulled under her own direction and enriched with flat tints of color, are interesting and expressive, rich in line and large and full in modeling. The color was not, however, wholly an improving experiment. Under the friendly influence of time it may become an element of beauty, since in no case is it either commonplace or crude, but in its newness it lacks something of both delicacy and depth. The later etchings without color are more nearly completely satisfying. The three charming interpretations of children ^{here} recently sent over to this country are full of freshness and life, and are admirable examples of the brilliant use of pure line. The attitude of the child in the etching reproduced here is, indeed, quite an extraordinary feat of richness of expression with economy of means. The heavy little head sagging against the tense arm, the small, childish neck and thin shoulder are insisted upon just sufficiently to render the mood of light

weariness, and the little face, full of individuality, is tenderly observed and modeled with feeling. The psychological bent of the artist, her interest in the portrayal of mental and moral qualities, is nowhere more clearly revealed than in her drawings of children. She has never been content to reproduce merely the physical plasticity and delicacy of infancy, but has shown in her joyous babies and dreamy little girls at least the potentiality of strong wills and clear minds. Great diversity of character and temperament are displayed in the expressive curves of the plump young faces, and the eyes, in particular, questioning, exultant, wondering, reflective or merry, betray a penetrating and subtle insight into the dawning personality under observation.

One of her earliest works recently has been added to the Wilstach collection in Philadelphia. It shows a man and two women on a balcony. The straight line of the balcony railing stretches across the foreground without any modification of its rigid linear effect. The man's figure is in shadow, barely perceptible as to detail, yet indicated without uncertainty of drawing or vagueness of any kind, a solid figure the "tactile values" of which are clearly recognized. One of the women is bending over the railing in a half-shadow while the other lifts her face toward the man in an attitude that makes exacting requirements of the artist's knowledge of foreshortening.



From the Wilstach Collection, Philadelphia.

ON THE BALCONY
From a painting by Mary Cassatt

The whole is duskily brilliant in color, full of the sense of form, simple, dignified, sturdy, opulent. It shows that Miss Cassatt held at the beginning of her career as now, valuable ideals of competency and lucidity in the interpretation of life.



WOMAN WITH A FAN
From a painting by Mary Cassatt

MAX KLINGER

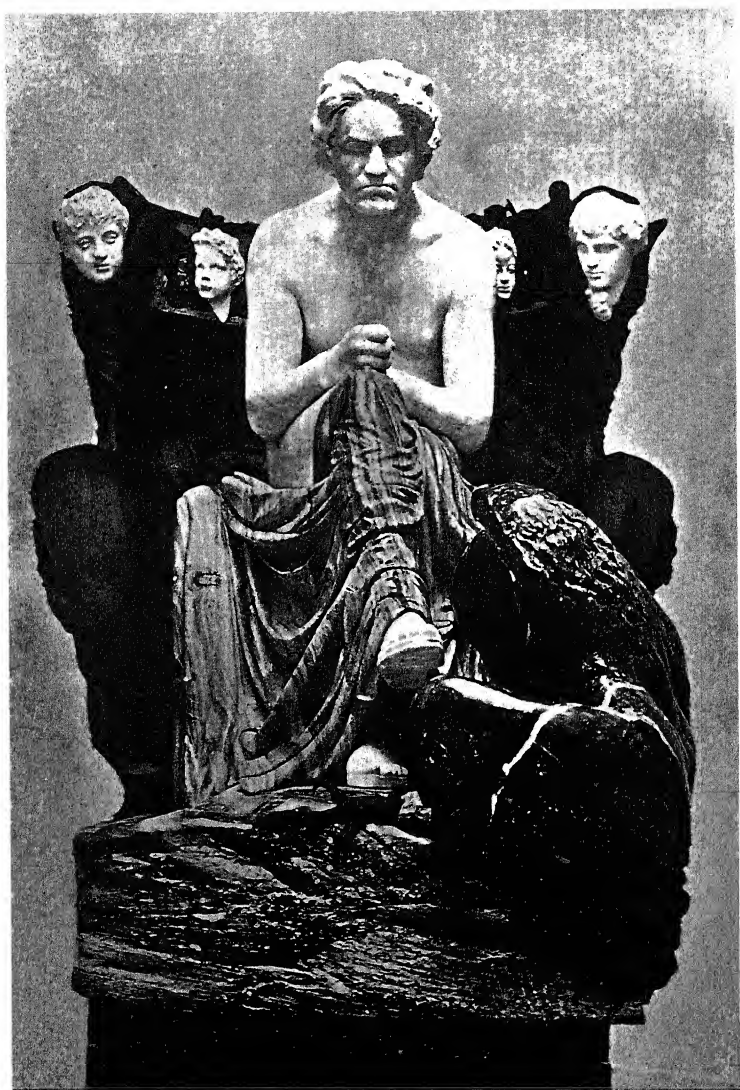
III

MAX KLINGER

MAX KLINGER is one of the most interesting and representative figures in the art of Germany to-day. Essentially German in manner of thought and feeling, he has brought into the stiff formality of early nineteenth century German painting and sculpture a plasticity of mind and an elevation of purpose and idea that suggest (as most that is excellent in Germany does suggest) the influence of Goethe. In his restless interrogation of all the forms of representative art, his work in the mass shows a curious mingling of fantasy, imagination, brusque realism, antique austerity, and modern science. The enhancing of the sense of life is, however, always the first thought with him, and lies at the root of his method of introducing color into sculpture, not by the means of a deadening pigment but by the use of marbles of deep tints and positive hues, and of translucent stones. As an artist, his chief distinction is this unremitting intention to convey in one way or another the sense of the vitalizing principle in animate objects. We may say of him that his

drawing is sometimes poor, that his imagination may be clumsy and infelicitous, that his treatment of a subject is frequently coarse and even crude, but we cannot deny that out of his etchings and paintings, and out of his great strange sculptured figures looks the spirit of life, more often defiant than noble, more often capricious than beautiful, but not to be mistaken, and the rarest phenomenon in the art product of his native country. He unites, too, a profound respect for the art of antiquity with a stout modern sentiment, a union that gives to his better work both dignity and force. What he seems to lack is the one impalpable, delicate, elusive quality that makes for our enjoyment of so many imperfect productions, and the lack of which does so much to blind us to excellence in other directions — the quality of charm, which in the main depends upon the possession by the artist of taste.

Max Klinger was born in Leipzig on the eighteenth of February, 1857. His father was a man of artistic predilections, and in easy circumstances, so that the choice of a bread-winning profession for the son was not of first importance. As Klinger's talent showed itself at a very early age, it was promptly decided that he should be an artist. He left school at the age of sixteen, and went to Karlsruhe, where Gussow was beginning to gather about him a large number of pupils. In 1875 he followed Gus-



BEETHOVEN

From a statue in colored marble by Max Klinger

sow to Berlin, where he came also under the influence of Menzel. Gussow's teaching was all in the line of individualism and naturalism. He led his pupils straight to nature for their model, and encouraged them to paint only what they themselves saw and felt. For this grounding in the representation of plain facts Klinger has been grateful in his maturer years, and looks back to his first master with admiration and respect as having early armed him against his tendency toward fantasy and idealism. His early style in the innumerable drawings of his youth is thin and weak, without a sign of the bold originality characterizing his recent work, and he obviously needed all the support he could get from frank and sustained observation of nature. His first oil-painting, exhibited in Berlin in 1878, showed the result of Gussow's influence in its solidity and practical directness of appeal, but a number of etchings, executed that year and the next — forerunners of the important later series — indicate the natural bent of the young artist's mind toward symbolic forms and unhackneyed subjects.

About the art of drawing as distinguished from that of painting he has his own opinions, expressed with emphasis in an essay called *Malerei und Zeichnung*. Drawing, etching, lithography and wood-engraving he considers preeminently adapted to convey purely imaginative thoughts such as would lose a part of their evanescent

suggestiveness by translation into the more definite medium of oil-color, and he holds *Griffelkunst*, or the art of the point in as high estimation as any other art for the interpretation of ideas appropriate to it, an opinion not now as unusual as when he first announced it to his countrymen. For about five years after the close of his student period, he occupied himself chiefly with etchings, turning out between 1879 and 1883 no fewer than nine of the elaborate "cycles" which are so expressive of his method of thought, and of the best qualities of his workmanship. In these cycles he delights in following a development not unlike that of a musical theme, beginning with a prelude and carrying the idea through manifold variations to its final expression. His curious history of the finding of a glove which passes through different symbolic forms of individuality in the dreams of a lover, is a fair example of his eccentric and somewhat lumbering humor in the use of a symbol in his earlier years. His etchings for Ovid's *Metamorphoses* show the same violent grasp of the lighter side of his subject, but in his landscape etchings of 1881 we have ample opportunity to see what he could do with a conventionally charming subject treated with conventional sentiment and without symbolic intention. The moonlight scene which he calls *Mondnacht*, has all the subtle exquisite feeling for harmony and tone to be gained from a Whistler nocturne.

The dim light on the buildings, the soft sweep of the clouds across the dark sky, the impalpable rendering, the grave and deep beauty of the scene combine to express the essence of night and its mystery. The oil-painting *Abend*, of 1882, also bears eloquent testimony to Klinger's power to evoke purely pictorial images of great loveliness.

In 1882, after about a year of study in Munich, he painted the important frescoes for the Steglitz Villa, in which the influence of Boecklin played freely. It was in Paris, however, where he studied between 1883 and 1885, that Klinger received his strongest and most definite impulse toward painting. His *Judgment of Paris* revealed the fact that the young painter had come into possession of himself, and could be depended upon for qualities demanding constraint and a measure of severity. In choosing a legend of antiquity for the subject of his picture, he may have felt a psychological obligation to obey the greater influences of the antique tradition. At all events he rather suddenly developed a style of great maturity and firmness. From Paris he went back to Berlin, but in 1889 he started for Rome, where he spent four profitable years. The fruit of this Roman period has continued to ripen up to the present time, although since 1893 Klinger has made his home in Leipzig, his *wanderjahre* apparently over and done with. He not

only painted in Rome a *Pietà*, a *Crucifixion*, and a number of pictures in which problems of open-air painting are attacked, but he conceived there the powerful series of etchings on the subject of death, and there he made his first attempts in colored sculpture. From his earliest years, the image of death had often solicited him, and some of his interpretations are filled with dignity and pathos. In the slender, rigid figure on a white draped bed, from the etching cycle entitled *Eine Liebe*, there is the suggestion of a classic tomb, severe and impressive in outline, while nothing could be more poignant than the emotional appeal of the *Mutter und Kind* in the second death series. To turn from these to the two religious paintings executed in Rome, is to realize that eccentric as Klinger often is, both in choice of subject and treatment, his attitude toward the mysteries and problems of man's existence is that of a serious thinker with a strong artistic talent, but a still stronger intelligence. It is not, however, until we reach the period which he devotes to sculpture, that we find in his art the quality of nobility, a certain breadth, which in spite of innovations in execution and almost trivial symbolic detail, impresses upon his conceptions the classic mark.

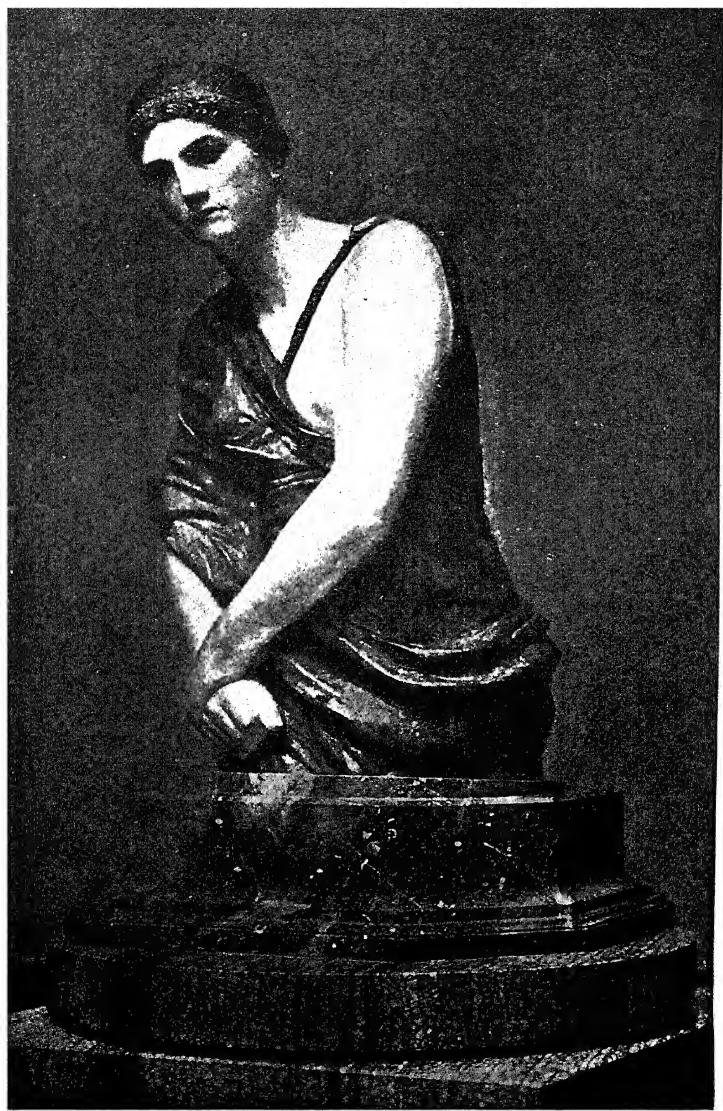
He began his studies for his great polychromatic statue of Beethoven as early as 1886, fifteen years before its completion. In 1892 it was reported in Rome that he had

turned to sculpture as a new field in which to prove himself a master, and his first exhibited figure placed him above the rank of the amateur. He threw himself into his new work with his usual energy, making himself familiar with the technicalities of marble cutting in order to follow the execution with intelligence at every stage. He sought for his material with unwearying zest, taking long journeys into Italy, Greece and the Pyrenees to procure marble with the soft, worn, rich quality produced by exposure to the weather; with this he combined onyx and brilliant stones, bronze, ivory and gold, always with the intention of creating an impression of life in addition to producing a decorative result. His strong decorative instinct comes to his aid, however, in avoiding the incoherence that would seem inevitable from the mixture of so many and such diverse materials, and the equally strong intellectual motive always obvious in his work also tends to hold it together in a more or less dignified unity. The *Cassandra*, his second colored statue, finished in Leipzig in 1895, and now in possession of the Leipzig Museum, is especially free from eccentricity and caprice. The beautiful Greek head, with its deep-set eyes and delicate mouth, is expressive of intense but normal feeling. The flesh is represented by warm-toned marble, the hair is brownish-red, the garment is of alabaster, yellowish-red with violet tones, and the figure stands on a pedestal of

Pyraean marble. In color effect, however, the *Beethoven* is the most striking. In *Les Maîtres Contemporains*, M. Paul Mongré thus describes it:

“The pedestal, half rock, half cloud, which supports the throne of the Olympian master, is of Pyraean marble of a dark violet-brown; the eagle is of black marble, veined with white, its eyes are of amber. The nude bust of Beethoven is of white Syrian marble, with light yellowish reflections, the drapery, hanging in supple folds, is of Tyrolean onyx with yellow-brown streaks in it. The throne of bronze is of a dull brown tone, except in the curved arms, which are brilliantly gilded. Five angel heads in ivory are placed like a crown on the inside of the back of the throne; their wings are studded with multi-colored gems and with antique fluorspar; the back of the throne is laid with blue Hungarian opals.” All these different elements, the French critic maintains, are held together in reciprocal cohesion, and are kept subordinated to the bold conception of Beethoven as the Jupiter of music — “the godlike power accumulated and concentrated, on the point of breaking forth in lightnings; the eagle in waiting, ready to take flight, as the visible thought of Jupiter, before whom will spring up a whole world, or the musical image of a world: that is what is manifested by this close alliance of idea and form.”

This monument to Beethoven is a performance designed



CASSANDRA

From a statue in colored marble by Max Klinger

to express not merely the artistic interest of the subject for Klinger, but the abounding enthusiasms of the latter for the great musician's genius. Immediately after leaving Rome, Klinger also brought to completion a series of etchings called *Brahms-phantasie*, and intended to illustrate the emotions aroused by the compositions of Brahms. In 1901 he made a portrait bust of Liszt, and his drawings for the *Metamorphoses* were dedicated to Schumann. In the autumn of 1906 his Brahms memorial was placed in the new Music Hall in Hamburg. This memorial monument has the form of a powerful Hermes with the head of Brahms. The Muse of tone is apparently whispering secrets of art into the ears of the master. His debt, therefore, to the masters of music may be considered as fully and promptly paid, and the impression of hero-worship conveyed by these ardent tributes is a reminder that the artist is young in temperament, Teutonic in origin, and untouched by the modern spirit of indifference to persons. Unlike many German artists of the present day, he did not find in Paris the atmosphere that suited him. In spite of his years there and in Rome, he has remained undisturbed by any anti-German influence. His compatriots speak with pride of the intensely national character of his mind, and have early recognized his importance, as perhaps could hardly have failed to be the case with powers so far from humble, and a method so far from

patient. France also has paid him more than one tribute of appreciation, and the general feeling toward him seems now to be that expressed by one of his German admirers in America: "Why criticize him? He is so overwhelming, so overpowering intellectually that the best we can do is to try to understand him."

ALFRED STEVENS

IV

ALFRED STEVENS

AN exhibition of the paintings of Alfred Stevens was held in April and May, 1907, at the city of Brussels, and later in May and in June at the city of Antwerp. The collection comprised examples from the museums at Brussels, Antwerp, Paris and Marseilles, and from the galleries of many private owners. It was representative in the fullest sense of the word, showing the literal tendencies of the artist's youth in such pictures as *Les Chasseurs de Vincennes* (1855) tightly painted, conscientiously modeled, with only the deep, resonant red of a woman's cape to indicate the magnificent color-sense soon to be revealed; or *Le Convalescent*, in which the two sympathetic women hovering over the languid young man in a Paris drawing-room are photographically true to the life of the time, without, however, conveying its spiritual or intellectual expression; showing also the rich and grave middle period in which beauty of face and form and the charm of elegant accessories are rendered with singular intensity and perfect sincerity; as

in *Les Visiteuses*, *Désespérée*, etc.; and, finally, showing the psychological synthesis of the later years, which reveals itself in such works as *Un Sphinx Parisien*, baffling in its fixed introspective gaze, and executed with an impeccable technique.

Many of the early pictures have a joyousness of frank workmanship, a directness of attack and a simplicity of arrangement that appeal to the world at large more freely than the subtler blonde harmonies of the later years. The *Profil de Femme* (1855) in which M. Lambotte discerns the influence of Rembrandt, is more suggestive to the present writer of familiarity with Courbet's bold, heavy impasto and sharp transitions from light to shadow. The *Réverie* of the preceding year has also its suggestions of Courbet, in spite of the delicately painted flowers in the Japanese vase; but in the pictures of the next few years, the robust freshness of the painter's Flemish vision finds expression in color-schemes that resemble nothing so much as the gardens of Belgium in springtime, filled with hardy blossoms and tended by skilful hands; *La Consolation* of 1857, for example, in which the two black-robed women form the heavy note of dead color against which are relieved the pink and white of their companion's gown, the pale yellow of the wall, the blue of the floor and the low, softly brilliant tones of the beautiful tapestry curtain.

Another painting of about the same time has almost the charm of Fantin-Latour's early renderings of serious women bending over their books or their sewing. In *La Liseuse* the girl's face is absorbed and thoughtful, the color harmony is quiet, the white dress, the dull red of the chair, the blue and yellow and green wools on the table, forming a pattern of closely related tones as various in its unity as the motley border of an old-fashioned dooryard. In other examples we have reminiscences of that time of excitement and esthetic riot when the silks and porcelains and enamels of the Far East came into the Paris of artists and artisans and formed at once a part of the baggage of the Parisian atelier. *L'Inde à Paris* is a particularly delightful reflection of this period of "Chinoiserie." It depicts a young woman in a black gown of the type that Millais loved, leaning forward with both hands on a table covered with an Indian drape. On the table stands the miniature figure of an elephant. The background is of the strong green so often used by Manet and the varied pattern of the table cover gives opportunity for assembling a number of rich and vivid yet quiet hues in an intricate and interesting color composition.

La Parisienne Japonaise is a subject of the kind that enlisted Whistler's interest during the sixties — a handsome girl in a blue silk kimono embroidered with white

and yellow flowers, and a green sash, looks into a mirror that reflects a yellow background and a vase of flowers. The colors are said to have faded and changed, to the complete demoralization of the color-scheme, but it is still a picture of winning charm, less reserved and dignified than Whistler's *Lange Leizen* of 1864, but with passages of subtle color and a just relation of values that have survived the encroachments of time.

From a very early period Stevens adopted the camel's-hair shawl with its multi-colored border as the model for his palette and the chief decoration of his picture. It is easier, says one of his French critics, to enumerate the paintings in which such a shawl does not appear than those in which it does. It slips from the shoulders of the *Désespérée* and forms a wonderful contrast to the smooth fair neck and arm relieved against it; it is the magnificent background of the voluminous gauzy robe in *Une Douloureuse Certitude*; it falls over the chair in which the young mother sits nursing her baby in *Tous les Bonheurs*; it hangs in the corners of studios, it is gracefully worn by fashionable visitors in fashionable drawing-rooms; its foundation color is cream or red or a deep and tender yellow as soft as that of a tea-rose; it determines the harmony of the colored silks and bric-à-brac which are in its vicinity, it rules its surroundings with a truly oriental splendor, and it gives to the work in which it plays so



L'ATELIER

From a painting by Alfred Stevens

prominent a part an individuality supplementary to the artist's own. It is as important as the rugs in the pictures of Vermeer of Delft or Gerard Terborch.

The silks and muslins of gowns and scarves are also important accessories in these pictures which have a modernity not unlike that of the pictures of Velasquez, in which the ugliness of contemporary fashions turns to beauty under the learned rendering of textures and surfaces. Bibelots and furnishings, wall-hangings, pictures, rugs, polished floors, glass and silver and china and jewels are all likewise pressed into the service of an art that used what lay nearest to it, not for the purposes of realism but for the enchantment of the vision. M. Lambotte has pointed out that Stevens introduced mirrors, crystals and porcelains into his canvasses with the same intention as that of the landscape-painter who makes choice of a subject with a river, lake or pond, knowing that clear reflections and smooth surface aid in giving the effect of distance and intervening atmosphere. The same writer has told us that so far from reproducing the ordinary costumes of his period Stevens took pains to seek exclusive and elegant examples, *chefs d'œuvres* of the dressmaker's art, and that such were put at his service by the great ladies of the second empire. The beautiful muslin over-dress of the *Dame en Rose* is perhaps the one that most taxed his flexible brush.

It is diaphanous in texture, elaborately cut and trimmed with delicate laces and embroideries, and the rose of the under-robe, the snowy white of the muslin, the silver ornaments and the pale blonde hair of the wearer make the lightest and daintiest of harmonies accentuated by the black of the lacquer cabinet with its brilliant polychromatic insets.

Unlike Whistler, Stevens never abandoned the rich and complicated color arrangements of his youth for an austere and restricted palette. He nevertheless was at his best when his picture was dominated by a single color, as in the wonderful *Fédora* of 1882 or *La Tricoteuse*. In the former the warmly tinted hair and deep yellow fan are the vibrant notes, the creamy dress, the white flowers, the silver bracelet, and the white butterfly making an *ensemble* like a golden wheatfield swept by pale lights. The piquant note of contrast is given by the blue insolent eyes and the hardly deeper blue blossoms of the love-in-a-mist held in the languid hands.

In *La Tricoteuse* the composition of colors is much the same — a creamy white dress with gray shadows, reddish yellow hair, and a bit of blue knitting with the addition of a sharp line of red made by the signature. There is no austerity in these vaporous glowing arrangements of a single color. They are as near to the portraiture of full sunlight as pigment has been able to approach

and if it can be said that Whistler has "painted the soul of color," it certainly can be said that Stevens here has painted its embodied life. For the most part we have, however, to think of Alfred Stevens as a portraitist of the ponderable world; a Flemish lover of brilliant appearances, a scrupulous translator of the language of visible things into the idiom of art. In the picture entitled *L'Atelier*, which we reproduce, is a more or less significant instance of his artistic veracity. On the crowded wall, forming the background against which is seen the model's charming profile, is a picture which obviously is a copy of the painting of *La Fuite en Egypte* by Breughel. Two versions of the same subject, one, the original by Breughel the elder, the other, a copy by his son, now hang in the Brussels Museum, alike in composition but differing in tone, the son's copy having apparently been left in an unfinished condition with the brown underpainting visible throughout. That this, and not the elder Breughel's, is the original of the picture in Steven's *L'Atelier* is clear at the first glance, the warm tonality having been accurately reproduced and even the drawing of the tree branches, which differs much in the two museum pictures having conformed precisely to that in the copy by the younger Breughel. It is by this accuracy of touch, this respect for differences of texture and material, this recognition of the part played in the

ensemble by insignificant detail, this artistic conscience, in a word, that Stevens demonstrates his descent from the great line of Flemish painters and makes good their tradition in modern life. Many of his sayings are expressive of his personal attitude toward art. For example:

"It is first of all necessary to be a painter. No one is wholly an artist who is not a perfect workman."

"When your right hand becomes too facile — more facile than the thought that guides it, use the left hand."

"Do not put into a picture too many things which attract attention. When every one speaks at once no one is heard."

Concerning technique, he says to his pupils: "Paint quantities of flowers. It is excellent practice. Use the palette knife to unite and smooth the color, efface with the knife the traces of the brush. When one paints with a brush the touches seen through a magnifying glass are streaked with light and shade because of the hairs of the brush. The use of the palette knife renders these strokes as smooth as marble, the shadows have disappeared. The material brought together renders the tone more beautiful. Marble has never an ugly tone."

"One may use impasto, but not everywhere. Your brush should be handled with reference to the character of what you are copying . . . do not forget that an

apple is smooth. I should like to see you model a billiard ball. Train yourself to have a true eye."

These are precepts that might be given by any good painter, but few of the moderns could more justly claim to have practiced all that they preached.

As a creative artist Stevens had his limitations. His lineal arrangements are seldom entirely fortunate and his compositions, despite the skill with which the given space is filled, lack except in rare instances the serenity of less crowded canvasses. He invariably strove to gain atmosphere by his choice and treatment of accessories but he rarely used the delicate device of elimination. Nevertheless he was a great painter and a great Belgian, untrammelled by foreign influences. He not only drank from his own glass but he drank from it the rich old wines of his native country.

A SKETCH IN OUTLINE OF JACQUES
CALLOT

V

A SKETCH IN OUTLINE OF JACQUES CALLOT

IN the Print Room of the New York Public Library are a large number of etchings by Jacques Callot, which are a mine of wealth to the painter-etcher of to-day, curious of the methods of his predecessors. Looking at the portrait of Callot in which he appears at the height of his brief career with well formed, gracious features, ardent eyes, a bearing marked by serenity and distinction, an expression both grave and genial, the observer inevitably must ask: "Is this the creator of that grotesque manner of drawing which for nearly three centuries has borne his name, the artist of the *Balli*, the *Gobbi*, the *Beggars*. In this dignified, imaginative countenance we have no hint of Callot's tremendous curiosity regarding the most fantastic side of the fantastic times in which he lived. We see him in the rôle least emphasized by his admirers, although that to which the greater number of his working years were dedicated: the rôle, that is, of moralist, philosopher and historian, one deeply impressed by the sufferings and cruelties of which he became a sorrowful critic.

There surely never was an artist whose life and environment were more faithfully illustrated by his art. To know one is to know the other, at least as they appear from the outside, for with Callot, as with the less veracious and ingenuous Watteau, it is the external aspect of things that we get and from which we must form our inferences. Only in his selection of his subjects do we find the preoccupation of his mind; in his rendering he is detached and impersonal, helping us out at times in our knowledge of his mental attitude with such quaint rhymes as those accompanying *Les Grandes Misères de la Guerre*, but chiefly confining his hand to the representation of forms, relations and distances, with as little concern as possible for the expression of his own temperament, or for psychological portraiture of any sort.

In the little history, more or less authenticated, of his eventful youth is the key to his charm as an artist, a charm the essence of which is freedom, an easy, informal way of looking at the visible world, a light abandon in the method of reproducing it, an independence of the tool or medium, resulting in art which, despite its minuteness of detail, seems to "happen" as Whistler has said all true art must. The beginning was distinctly picturesque, befitting a nature to which the world at first unfolded itself as a great Gothic picturebook filled with strange, eccentric and misshapen figures.

One spring day in 1604, a band of Bohemians, such as are described in Gautier's *Le Capitaine Fracasse*, might have been seen journeying through the smiling country of Lorraine on their way to Florence to be present there at the great Fair of the Madonna. No gipsy caravan of to-day would so much as suggest that bizarre and irresponsible company of men, women, and children, clad in motley rags, some in carts, some trudging on foot, some mounted on asses or horses rivaling Rosinante in bony ugliness, the men armed with lance, cutlass and rifle, a cask of wine strapped to the back of one, a lamb in the arms of another. A couple of the swarming children were decked out with cooking utensils, an iron pot for a hat, a turnspit for a cane, a gridiron hanging in front apron wise. Chickens, ducks, and other barnyard plunder testified to the marauding course of the troop whose advent at an inn was the signal for terrified flight on the part of the inmates. The camp by night, if no shelter were at hand, was in the forest, where the travelers tied their awnings to the branches of trees, built their fires, dressed their stolen meats, and lived so far as they could accomplish it on the fat of the land — for the most part of their way a rich and lovely land of vine-clad hills and opulent verdure.

The period was lavish in curious gay figures to set against the peaceful background of the landscape.

Strolling players of the open-air theaters, jugglers, fortune-tellers, acrobats, Pierrots, and dancers amused the pleasure-loving people. The band of Bohemians just described was but one of many. Its peculiarity consisted in the presence among its members of a singularly fair and spirited child, about twelve years of age, whose alert face and gentle manner indicated an origin unmistakably above that of his companions. This was little Jacques Callot, son of Renée Bruneault and Jean Callot, and grandson of the grandniece of the Maid of Orleans, whose self-reliant temper seems to have found its way to this remote descendant.

Already determined to be an artist, he had left home with almost no money in his pocket and without the consent of his parents, set upon finding his way to Rome, where one of his playfellows — the Israel Henriet, "*son ami*," whose name is seen upon so many of the later Callot prints — was studying.

Falling in with the gipsies, he traveled with them for six or eight weeks, receiving impressions of a flexible, wanton, vagabond life that were never entirely to lose their influence upon his talent, although his most temperate and scholarly biographer, M. Meaume, finds little of Bohemianism in his subsequent manner of living. Félibien records that according to Callot's own account, when he found himself in such wicked company, "he

lifted his heart to God and prayed for grace not to join in the disgusting debauchery that went on under his eyes." He added also that he always asked God to guide him and to give him grace to be a good man, beseeching Him that he might excel in whatever profession he should embrace, and that he "might live to be forty-three years old." Strangely enough this most explicit prayer was granted to the letter, and was a prophecy in outline of his future.

Arriving in Florence with his friends the Bohemians, fortune seemed about to be gracious to him. His delicate face with its indefinable suggestions of good breeding attracted the attention of an officer of the Duke, who took the first step toward fulfilling his ambition by placing him with the painter and engraver, *Canta Gallina*, who taught him design and gave him lessons in the use of the burin. His taste was already for oddly formed or grotesque figures, and to counteract this tendency *Gallina* had him copy the most beautiful works of the great masters.

Possibly this conventional beginning palled upon his boyish spirit, or he may merely have been impatient to reach Israel and behold with his own eyes the golden city described in his friend's letters. At all events, he shortly informed his master that he must leave him and push on to Rome. *Gallina* was not lacking in sympathy,

for he gave his pupil a mule and a purse and plenty of good advice, and started him on his journey.

Stopping at Siena, Callot gained his first notion of the style, later to become so indisputably his own, from Duccio's mosaics, the pure unshadowed outline of which he bore in mind when he dismissed shading and cross-hatching from the marvelously expressive little figures that throng his prints. He had hardly entered Rome, however, when some merchants from the town of Nancy, his birthplace, recognized him and bore him, protesting, back to his home.

Once more he ran away, this time taking the route to Italy through Savoy and leading adventurous days. In Turin he was met by his elder brother and again ignominiously returned to his parents. But his persistence was not to go unrewarded. The third time that he undertook to seek the light burning for him in the city of art, he went with his father's blessing, in the suite of the ambassador despatched to the Pope by the new duke, Henry II.

It is said that a portrait of Charles the Bold, engraved by Jacques from a painting, was what finally turned the scale in favor of his studying seriously with the purpose of making art his profession. He had gained smatterings of knowledge, so far as the use of his tools went, from Dumange Crocq, an engraver and Master of the

Mint to the Duke of Lorraine, and from his friend Israel's father, chief painter to Charles III. He had the habit also of sketching on the spot whatever happened to attract his attention.

In truth he had lost but little time. At the age of seventeen he was at work, and very hard at work, in Rome under Tempesta. Money failing him, he became apprenticed to Philippe Thomassin, a French engraver, who turned out large numbers of rubbishy prints upon which his apprentices were employed at so much a day. Some three years spent in this fashion taught Callot less art than skill in the manipulation of his instruments. Much of his early work is buried in the mass of Thomassin's production, and such of it as can be identified is poor and trivial. His precocity was not the indication of rapid progress. His drawing was feeble and was almost entirely confined to copying until 1616, when, at the age of twenty-four, he began regularly to engrave his own designs, and to show the individuality of treatment and the abundant fancy that promptly won for him the respect of his contemporaries.

While he was in Thomassin's studio, it is reported that his bright charm of face and manner gained him the liking of Thomassin's young wife — much nearer in age to Callot than to her husband — and the jealousy of his master. He presently left the studio and Rome

as well, never to return to either. It is the one misadventure suggestive of erratic tendencies admitted to Callot's story by M. Meaume, although other biographers have thrown over his life in Italy a sufficiently lurid light, hinting at revelries and vagaries and lawless impulses unrestrained. If, indeed, the brilliant frivolity of Italian society at that time tempted him during his early manhood, it could only have been for a brief space of years. After he was thirty all unquestionably was labor and quietness.

From Rome he went to Florence, taking with him some of the plates he recently had engraved. These at once found favor in the eyes of Cosimo II, of the Medici then ruling over Tuscany, and Callot was attached to his person and given a pension and quarters in what was called, "the artist's gallery." At the same time he began to study under the then famous Jules Parigi, and renewed his acquaintance with his old friend Canta Gallina, meeting in their studios the most eminent artists of the day — the bright day not yet entirely faded of the later Renaissance.

Still his work was copying and engraving from the drawings of others. Had he been under a master less interested and sympathetic than the good Parigi, it is possible that his peculiar talent would never have declared itself. At all events, Parigi urged him, and the



PORTRAIT OF JACQUES CALLOT
*Engraved by Vosterman after the painting of
Van Dyck*

urging seems to have been necessary, to improve his drawing, to drop the burin and study the great masters. Especially Parigi prayed him to cultivate his precious talent for designing on a very small scale the varied and complicated compositions with which his imagination teemed. His taste for whatever was fantastic and irregular in aspect had not been destroyed by his study of the beautiful. The Bohemian side of human nature, the only nature for which he cared, still fascinated his mind, whether it had or had not any influence upon his activities, and Parigi's remonstrances were silenced by his appreciation of the comic wit sparkling in his pupil's sketches.

We see little of Callot among his friends of this period, but the glimpses we get reveal a lovable and merry youth in whose nature is a strain of sturdy loyalty, ardent in work and patient in seeking perfectness in each individual task undertaken, but with a curious contrasting impatience as well, leading him frequently to drop one thing for another, craving the relaxation of change. An anecdote is told of him that illustrates the sweet-tempered blitheness of spirit with which he quickly won affection.

In copying a head he had fallen into an error common among those who draw most successfully upon a small scale, he had made it much too large. His fellow-students were prompt to seize the opportunity of jeering at him,

and he at once improvised a delightful crowd of impish creatures on the margin of his drawing, dancing and pointing at it in derision.

His progress under Parigi's wise instruction was marked, but it was four years after his arrival in Florence before he began to engrave to any extent from his own designs. In the meantime, he had studied architecture and aerial and linear perspective, and had made innumerable pen and pencil drawings from nature. He had also begun to practice etching, attaining great dexterity in the use of the needle and in the employment of acids.

In 1617 — then twenty-five years old — he produced the series of plates which he rightly deemed the first ripe fruits of his long toil in the domain of art. These were the delightful *Capricci di varie figure* in which his individuality shone resplendent. They reproduced the spectacle of Florence as it might then have been seen by any wayfarer; street people, soldiers, officers, honest tradesmen and rogues, mandolin players, loiterers of the crossways and bridges, turnpike-keepers, cut-throats, buffoons and comedians, grimacing pantaloons, fops, coquettes, country scenes, a faithful and brilliant study of the time, the manners, and the place. Parigi was enthusiastic and advised his pupil to dedicate the plates to the brother of the Grand Duke.

After this all went well and swiftly. Passing over many plates, important and unimportant, we come three years later to the *Great Fair of Florence*, pronounced by M. Meaume, Callot's masterpiece. "It is doubtful," says this excellent authority, "if in Callot's entire work a single other plate can be found worthy to compete with the *Great Fair of Florence*. He has done as well, perhaps, but never better."

At this time his production was, all of it, full of life and spirit, vivacious and fluent, the very joy of workmanship. He frequently began and finished a plate in a day, and his long apprenticeship to his tools had made him completely their master. In many of the prints are found traces of dry point, and those who looked on while he worked have testified that when a blank space on his plate displeased him he was wont to take up his instrument and engrave a figure, a bit of drapery, or some trees in the empty spaces, directly upon the copper, improvising from his ready fancy.

For recreation he commonly turned to some other form of his craft. He tried painting, and some of his admirers would like to prove that he was a genius in this sort, but it is fairly settled that when once he became entangled in the medium of color he was lost, producing the heaviest and most displeasing effects, and that he produced no finished work in this kind. He contributed

to the technical outfit of the etcher a new varnish, the hard varnish of the lute-makers which up to that time had not been used in etching, and which, substituted for the soft ground, enabled him to execute his marvelous little figures with great lightness and delicacy, and also made it possible for him to keep several plates going at once, as he delighted to do, turning from one to another as his mood prompted him.

This Florentine period was one of countless satisfactions for him. More fortunate than many artists, he won his fame in time to enjoy it. His productions were so highly regarded during his lifetime that good proofs were eagerly sought, and to use Baldinucci's expression, were "*enfermées sous sept clefs*." He was known all over Europe, and about his neck he wore a magnificent gold chain given him by the Grand Duke Cosimo II, in token of esteem. In the town which he had entered so few years before in the gipsy caravan, he was now the arbiter of taste in all matters of art, highly honored, and friend of the great. When Cosimo died and the pensions of the artists were discontinued, Callot was quite past the need of princely favors, and could choose his own path. He had already refused offers from Pope and emperor and doubtless would have remained in Florence had not Prince Charles of Lorraine determined to reclaim him for his native place.

In 1621 or 1622 he returned to Nancy, never again to live in Italy. He went back preeminent among his countrymen. He had done in etching what had not been done before him and much that has not been done since. He had created a new genre and a new treatment. He had been faithful to his first lesson from Duccio and had become eloquent in his use of simple outline to express joy, fear, calm or sorrow, his work gaining from this abandonment of shadows a largeness and clearness that separates him from his German contemporaries and adds dignity to the elegance and grace of his figures. His skill with the etching needle had become so great that technical difficulties practically did not exist for him. What he wished to do he did with obvious ease and always with distinction. His feeling for synthesis and balance was as striking as his love of the curious, and as these qualities seldom go together in one mind, the result was an art extremely unlike that of other artists. It was characteristic of him that he could not copy himself, and found himself completely at a loss when he tried to repeat some of his Florentine plates under other skies.

Arrived at Nancy, he found Henry II, the then reigning Duke of Lorraine, ready to accord him a flattering welcome, and under his favor he worked with increasing success. Among the plates produced shortly

after his return is one called *Les Supplices*, in which is represented all the punishments inflicted throughout Europe upon criminals and legal offenders. In an immense square the revolting scenes are taking place, and innumerable little figures swarm about the streets and even upon the roofs of the houses. Yet the impression is neither confused nor painful. A certain impersonality in the rendering, a serious almost melancholy austerity of touch robs the spectacle of its ignoble suggestion. Inspection of this remarkable plate makes it easy to realize Callot's supreme fitness for the tasks that shortly were to be laid upon him.

He was chosen by the Infanta Elisabeth-Claire-Eugenie of Austria to commemorate the Siege of Breda, in a series of etchings, and while he was in Brussels gathering his materials for this tremendous work he came to know Van Dyck, who painted his portrait afterward engraved by Vosterman, a superb delineation of both his face and character at this important period of his eminent career. Soon after the etchings were completed, designs were ordered by Charles IV, for the decorations of the great carnival of 1827. Callot was summoned to Paris to execute some plates representing the surrender of La Rochelle in 1828, and the prior attack upon the fortress of St. Martin on the Isle of Ré. In Paris he dwelt with his old friend Israel Henriet, who dealt largely

in prints and who had followed with keen attention Callot's constantly increasing renown. Henriet naturally tried to keep his friend with him in Paris as long as possible, but Callot had lost by this time the vagrant tendencies of his youth. He was married and of a home-keeping disposition, and all that Henriet could throw in his way of stimulating tasks and congenial society, in addition to the formidable orders for which he had contracted, detained him hardly longer than a year. Upon leaving he made over all his Parisian plates save those of the great sieges to Henriet, whose name as publisher appears upon them.

Callot's return to Nancy marked the close of the second period of his art, the period in which he painted battles with ten thousand episodes revealed in one plate, and so accurately that men of war kept his etchings among their text-books for professional reference. The next demand that was made upon him to represent the downfall of a brave city came from Louis XIII, upon the occasion of his entering Nancy on the 25th of September, 1633. By a ruse Richelieu had made the entry possible, and the inglorious triumph Louis deemed worthy of commemoration by the accomplished engraver now his subject. Neither Callot's high Lorraine heart nor his brilliant instrument was subjugated, however, and he respectfully begged the monarch to absolve him from a

task so revolting to his patriotism. "Sire," he said, "I am of Lorraine, and I cannot believe it my duty to do anything contrary to the honor of my Prince and my Country." The king accepted his remonstrance in good part, declaring that Monsieur of Lorraine was very happy to have subjects so faithful in affection. Certain courtiers took Callot to task, however, for his refusal to obey the will of His Majesty, and to them Callot responded that he would cut off his thumb rather than do violence to his sense of honor. Some of the artist's historians have made him address this impetuous reply to the king himself, but M. Meaume reminds us that, familiar with courts, he knew too well the civility due to a sovereign to make it probable that he so forgot his dignity. Later the king tried to allure Callot by gifts, honors and pensions, but in vain. The sturdy gentleman preferred his oppressed prince to the royal favor, and set himself to immortalizing the misfortunes of his country in the superb series of etchings which he called "*Les Misères de la Guerre*." He made six little plates showing in the life of the soldier the misery he both endures and inflicts upon others. These were the first free inspiration of the incomparable later set called "*Les Grandes Misères*," "a veritable poem," M. Meaume declares, "a funeral ode describing and deploring the sorrows of Lorraine." These sorrows so much afflicted him

that he would gladly have gone back to Italy to spend the last years of his life, had not the condition of his health, brought on by his indefatigable labor, prevented him.

He lived simply in the little town where he had seen his young visions of the spirit of art, walking in the early morning with his elder brother, attending mass, working until dinner time, visiting in the early afternoon with the persons, many of them distinguished and even of royal blood, who thronged his studio, then working until evening. He rarely attended the court, but grew constantly more quiet in taste and more severe in his artistic method, until the feeling for the grotesque that inspired his earlier years were hardly to be discerned. Once only, in the tremendous plate illustrating the Temptation of Saint Anthony, did he return to his old bizarre vision of a world conceived in the mood of Dante and Ariosto.

Callot died on the 24th of March, 1635, at the age of forty-three. Still a young man, he had passed through all the phases of temperament that commonly mark the transit from youth to age. And he had used his art in the manner of a master to express the external world and his convictions concerning the great spiritual and ethical questions of his age. He enunciated his message distinctly; there were no tender gradations, no un-

certainties of outline or mysteries of surface in his work. It is the grave utterance of the definite French intelligence with a note of deeper suggestion brought from those regions of ironic gloom in which the Florentine recorded his sublime despair.

CARLO CRIVELLI

VI

CARLO CRIVELLI

AMONG the more interesting pictures acquired by the Metropolitan Museum within the past two years are the panels by Carlo Crivelli, representing respectively St. George and St. Dominic.

Crivelli is one of the fifteenth century Italian masters who show their temperament in their work with extraordinary clearness. His spirit was ardent and his moods were varying. With far less technical skill than his contemporary, Mantegna, he has at once a warmer and more brilliant style and a more modern feeling for natural and significant gesture. His earliest known work that bears a date is the altar-piece in S. Silvestro at Massa near Fermo; but his most recent biographer, Mr. Rushworth, gives to his Venetian period before he left for the Marches, the Virgin and Child now at Verona, and sees in this the strongest evidences of his connection with the School of Padua. Other important pictures by him are at Ascoli, in the Lateran Gallery, Rome, in the Vatican, in the Brera Gallery at Milan, in the Berlin

Gallery, in the National Gallery at London, in Frankfurt (the Städel Gallery) in the Museum of Brussels, in Lord Northbrook's collection, London, in the Boston Museum, in Mrs. Gardiner's collection at Boston, and in Mr. Johnson's collection at Philadelphia. The eight examples in the National Gallery, although belonging for the most part to his later period, show his wide range and his predominating characteristics, which indeed are stamped with such emphasis upon each of his works that despite the many and great differences in these, there seems to be little difficulty in recognizing their authorship. No. 788, *The Madonna and Child Enthroned, surrounded by Saints*, an altarpiece painted for the Dominican Church at Ascoli in 1476, is the most elaborate and pretentious of the National Gallery compositions, but fails as a whole to give that impression of moral and physical energy, of intense feeling expressed with serene art, which renders the *Annunciation* (No. 739) both impressive and ingratiating. The lower central compartment is instinct with grace and tenderness. The Virgin, mild-faced and melancholy, is seated on a marble throne. The Child held on her arm, droops his head, heavy with sleep, upon her arm in a babyish and appealing attitude curiously opposed to the dignity of the Child in Mantegna's group which hangs on the opposite wall. His hand clasps his mother's finger and

his completely relaxed figure has unquestionably been studied from life. At the right and left of the Virgin are St. Peter and St. John, St. Catherine of Alexandria and St. Dominic, whole-length figures strongly individualized and differentiated. St. John in particular reveals in the beauty of feature and expression Crivelli's power to portray subtleties and refinements of character without sacrificing his sumptuous taste for accessories and ornament. The Saint, wearing his traditional sheep skin and bearing his cross and scroll, bends his head in meditation. His brows are knit, his features, ascetic in mold and careworn, are eloquent of serious thought and moral conviction. By the side of St. Peter resplendent in pontifical robes and enriched with jewels, he wears the look of a young devout novice not yet so familiar with sanctity as to carry it with ease. He stands by the side of a little stream, in a landscape that combines in the true Crivelli manner direct realism with decorative formality. The St. Dominic with book and lily in type resembles the figure in the Metropolitan, but the face is painted with greater skill and has more vigor of expression. Above this lower stage of the altarpiece are four half-length figures of St. Francis, St. Andrew the Apostle, St. Stephen and St. Thomas Aquinas, and over these again are four pictures showing the Archangel Michael trampling on the Dragon, St. Lucy the Martyr, St. Jerome and St.

Peter, Martyr, all full length figures of small size and delicately drawn, but which do not belong to the original series. The various parts of the altarpiece were enclosed in a splendid and ornate frame while in the possession of Prince Demidoff in the latter half of the nineteenth century and the whole is a magnificent monument to Crivelli's art. The heavy gold backgrounds and the free use of gold in the ornaments, together with the use of high relief (St. Peter's keys are modeled, for example, almost in the round, so nearly are they detached from the panel) represent his tendency to overload his compositions with archaic and realistic detail, but here as elsewhere the effect is one of harmony and corporate unity of many parts. The introduction of sham jewels, such as those set in the Virigin's crown and in the rings and medallions worn by Peter, fails to destroy the dignity of the execution. It may even be argued that these details enhance it by affording a salient support to the strongly marked emotional faces of the saints and to the vigorous gestures which would be violent in a classic setting.

A quite different note is struck in the grave little composition belonging to an altarpiece of early date in which two infant angels support the body of Christ on the edge of the tomb. Nothing is permitted to interrupt the simplicity of this pathetic group. In the much more



ST. DOMINIC
From a panel by Carlo Crivelli

passionate rendering of a similar subject — the *Pietà* in Mr. Johnson's collection — the child angels are represented in an agony of grief, their features contorted and their gestures despairing. The little angels of the National Gallery picture, on the contrary, are but touched by a pensive sorrow. One of them rests his chin upon the shoulder of the Christ half tenderly, half wearily; the other in fluttering robes of a lovely yellow, applies his slight strength to his task seriously but without emotion. The figure of Christ, tragically quiet, with suffering brows, the wound in the side gaping, is without the suggestion of extreme physical anguish that mark the figure in the Boston *Pietà*. The sentiment with which the panel is inspired is one of gentleness, of resignation, of self-control and piety. The same sentiment is felt in the companion panel, now in the Brussels Gallery — *The Virgin and the Child Jesus* — which originally, with the *Pietà*, formed the central double compartment of a triptych at Monte Fiore, near Fermo. The sad coloring of the Virgin's robe — a dull bluish green with a gold pattern over an under robe of pale ashes of roses, the calm, benign features, the passive hands, are all in the spirit of subdued feeling. The child alone, gnomish in expression and awkward in a straddling attitude upon his mother's knee, fails to conform to the general gracious scheme.

In the *Annunciation* already mentioned, we have

another phase of Crivelli's flexible genius — a phase in which are united the pomp and splendor of his fantastic taste with the innocence and sweetness of his most engaging feminine type. It would be difficult to imagine a more demure and girlish Virgin than the small kneeling figure in the richly furnished chamber at the right of the panel. The glory of her fate is symbolized by the broad golden ray falling from the heavens upon her meekly bowed head. Her face is pale with the dim pallor that commonly rests upon Crivelli's flesh tones, and her clasped hands have the exaggerated length of finger and also the look of extraordinary pliability which he invariably gives. Outside the room in the open court kneels the Angel of the Annunciation and by his side kneels St. Emedius, the patron of Ascoli, with a model of the city in his hands. These figures are realistic in gesture and expression, interested, eager, responsive, filled with quick life and joyous impulse. The richly embroidered garment of the angel, his gilded wings, his traditional attitude, neither overpower nor detract from the vivid individuality of the beautiful face so firmly yet so freely modeled within its delicate hard bounding line. This feeling of actuality in the scene is carried still farther by the introduction of a charming little child on a balcony at the left, peering out from behind a pillar with naive curiosity and half-shy, half-bold determination



In the Metropolitan Museum, New York.

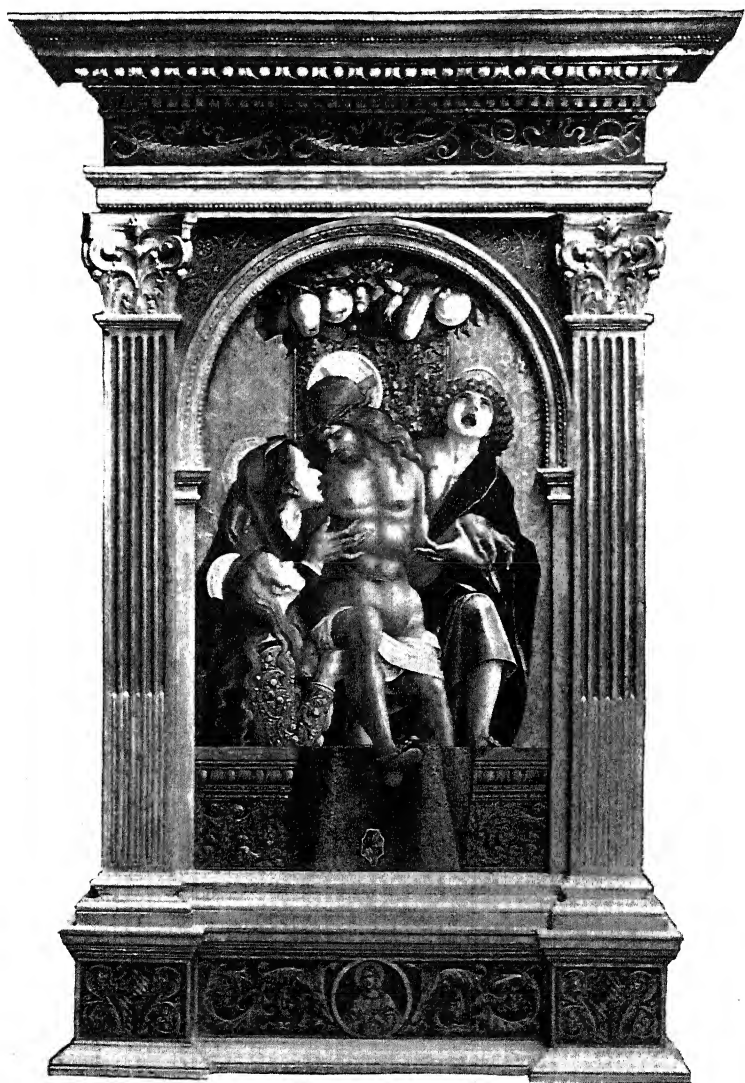
ST. GEORGE

From a panel by Carlo Crivelli

to see the end of the adventure. All this is conceived in the spirit of modernity and the personal quality is unmistakable and enchanting. There is no excess of emotion nor is there undue restraint. There is a blithe sense of the interest of life and the personality of human beings that gives a value to the subject and a meaning beyond its accepted symbolism. On the technical side, also, the panel has remarkable merit even for this expert and careful painter. His Venetian fondness for magnificent externals finds ample expression in the rich accessories. A peacock is perched on the casement of the Virgin's room, flowers and fruits, vases and variegated marbles all come into the plan of the handsome environment, and are justified artistically by the differentiation of textures, the gradation of color, the research into intricacies of pattern, the light firm treatment of architectural structure, and the skilful subordination of all superficial detail to the elements of the human drama, the figures of which occupy little space, but are overwhelming in significance.

It is interesting to compare this *Annunciation* with the two small hexagonal panels of the same subject in the Städel Museum at Frankfurt which are earlier in date. In many respects the compositions are closely similar. There is the same red brick wall, the same Oriental rug hanging from the casement, the types of Angel

and Virgin are the same, but in the Frankfurt panel there is more impetuous motion in the gesture of the Angel, who hardly pauses in his flight through air to touch his knee to the parapet. His mouth is open and the words of his message seem trembling on his lips. Although all the outlines are severely defined with the sharpness of a Schiavone, the interior modeling is sensitive and delicate and in the case of the Virgin, tender and softly varied, so that the curve of the throat and chin seem almost to ripple with the breathing, the young chest swells in lovely gradation of form under the close bodice, and the whole figure has a graciousness of contour, a slim roundness and elasticity by which it takes its place among Crivelli's many realizations of his ideal type as at least one of the most lovable if not the most characteristic and personal. Especially fine, also, is the treatment of the drapery in these two admirable little panels. The mantle surrounding the angel billows out in curling folds as eloquent of swift movement as the draperies of Botticelli's striding nymphs; and the opulent line of the Virgin's cloak is superb in its lightly broken swirl about the figure. The hair, too, of both the Angel and the Virgin, waves in masses at once free and formal, with something of the wild beauty of Botticelli's windblown tresses. The analogy between the two painters, the ardent and poetic Florentine and the no less ardent and at times almost as poetic Venetian



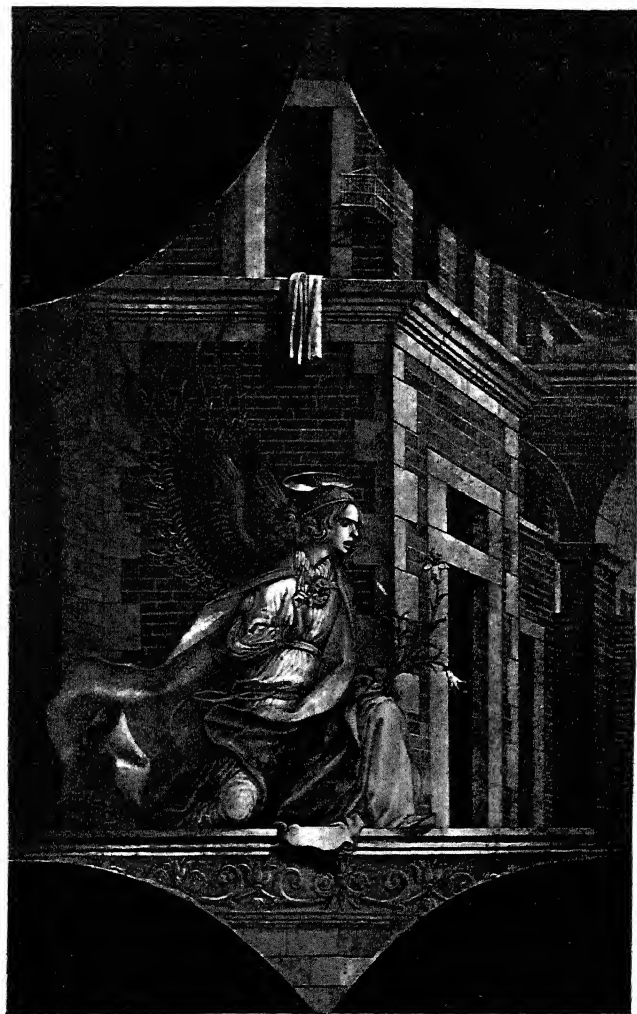
In the Metropolitan Museum, New York.

PIETÀ
From a panel by Carlo Crivelli

(if we accept his own claim to the title), might be further dwelt upon, although it would be easy to overemphasize it. One attribute, certainly, they had in common and it is the one that most completely separates each of them from his fellows — the exultant *verve*, that is, with which the human form is made to communicate energy of movement in their compositions. It is impossible to believe that either of them ever painted a tame picture. If, however, Crivelli could not be tame he could be insipid, escaping tameness by what might be called the violence of his affectation. The *St. George* in the Metropolitan Museum is an instance of his occasional use of a type so frail and languid in its grace and so sentimental in gesture and expression as to suggest caricature. Another example dated 1491 is the *Madonna and Child Enthroned* in the National Gallery. On either side of the melancholy Madonna are St. Francis and St. Sebastian. The latter is pierced by arrows and tied to a pillar, but so far from wearing the look of suffering or of calm endurance, he has a trivial glance of deprecation for the observer, and his figure is wholly wanting in the force of young manhood. A striking contrast to this effeminate mood may be found in No. 724, also a *Madonna Enthroned*, between St. Jerome and St. Sebastian, a late signed picture of Crivelli's declining talent, with a predella below the chief panel in which appear St. Cathe-

rine, St. Jerome in the Wilderness, the Nativity, the Martyrdom of St. Sebastian again, and St. George and the Dragon. The little compartment containing the scene of the Nativity is quite by itself among Crivelli's works for intimate and homely charm. The simplicity of the surroundings and the natural attitudes of the people have an almost Dutch character, borne out by the meticulous care for detail in the execution united to an effect of *chiaro-oscuro* very rare in early Italian art and hardly to be expected in a painter of Crivelli's Paduan tendencies. The St. George is more characteristic, with an immense energy in its lines. In arrangement it recalls the St. George of Mrs. Gardiner's collection and despite its small size is almost the equal of that magnificent example in concentration and fire.

Still another type, and one that combines dignity and much spirituality with naive realism, is the *Beato Ferretti* (No. 668), showing an open landscape with a village street at the right and a couple of ducks in a small pond at the left, the Beato kneeling in adoration with a vision of the *Virgin and Child* surrounded by the *Mandorla* or *Verica* glory appearing above. The kneeling saint is realistically drawn and his face wears an expression of intense piety. The landscape is marked by the bare twisted stems of trees, that seem to repeat the rigid and conceivably tortured form of the saint. A beautiful



In the Städel Gallery at Frankfurt.

A PANEL BY CARLO CRIVELLI (*a*)

building with a domed roof is seen at the right. At the top of the picture across the cloud-strewn sky is a festoon of fruits, Crivelli's characteristic decoration.

In all these pictures Crivelli reveals himself as an artist filled with emotional inspiration, to whom the thrill of life is more than its trappings, and one, moreover, who observes, balances and differentiates. The society of his saints and angels is stimulating; the element of the unexpected enters into his work in open defiance of his pronounced mannerism. It is possible to detect beneath the close and manifold coverings of his ornate decoration a swift flame of imaginative impulse such as Blake sent into the world without such covering. He would have pleased Blake by this nervous energy and by his pure bright coloring, despite the fact that he signed himself "Venetus." He painted in tempera and finished his work with care and deliberation. It is remarkable that so little of his mental fire died out in the slow process of his execution. It is still more remarkable that in spite of his reactionary tendencies, his archaistic use of gold and relief at a moment when all great artists were renouncing these, he is intensely modern in his sentiment. He seems to represent a phase of human development at which we in America have but recently arrived; a phase in which appreciation of ancient finished forms of beauty is united to a restless eagerness

and the impulse toward exaggerated self-expression. He is supposed to have been born about 1440, which would make him a contemporary of the two Bellini, of Hans Memling and of Mantegna. Had he only been able to give his imagination a higher range — had he possessed a more controlling spiritual ideal, had the touch of self-consciousness that rests like a grimace on the otherwise lovely aspect of much of his painting, been eliminated, he would have stood with these on the heights of fifteenth century art. We are fortunate to have in America the Boston Museum *Pietà*, which shows him in one of his most temperate moods, the *Pieta* of Mr. Johnson's collection, which is the emphatic expression of his least restrained moments, the *St. George* of Mrs. Gardiner's collection, in which his grasp of knightly character and pictorial grace is at its best, and these two strongly contrasted types of the Metropolitan Museum.



In the Städel Gallery at Frankfort.

A PANEL BY CARLO CRIVELLI (*b*)

REMBRANDT AT THE CASSEL GALLERY

VII

REMBRANDT AT THE CASSEL GALLERY

THE art gallery of Cassel is well known to connoisseurs as containing a group of Rembrandts of the first order. The earliest example is a small painting of a boy's head supposed to be a portrait of the artist at the age of twenty or one and twenty; Dr. Bode considers 1628 too late rather than too early as the probable date, and the same authority warns us against considering such studies in the light of serious portraiture: "It had never occurred to the young artist," he says, "to make a dignified portrait of himself at the time when he painted these pictures." The execution is clumsy, the color is dull and heavy and of the brownish tone common to Rembrandt's early painting, and much of the drawing — as in the rings of hair escaping to the surface from the thick curling mass — is meaningless and indefinite, but the distribution of light and shade is not unlike that of Rembrandt's later work and the touch has a certain bold freedom that seems to have been his from the first whenever he served as his own model, even while his handling was still hard and prim

in his portraits of others. Another work ascribed to his early period, about 1634, is the "Man with a Helmet," also commonly known as a self-portrait, fluent in execution and vivacious and lifelike in expression, yet not without that hint of conscious pose common with the artist in his endeavors to force the note of character. The blunt strong features are strikingly like those of the authenticated portraits of the artist, but Dr. Karl Voll, Director of the Alt Pinakothek at Munich, declares that the idea of a "self-portrait," attractive as it is, can hardly in this case be upheld. Whoever the sitter may have been, the painting is an amazing example of dexterity of hand and acute observation. The sharp glitter of the helmet, the contrasting flesh-like quality of the painting in the face, the light vigorous drawing of the moustache and hair, give an impression of the artist's mastery of his craft hardly to be surpassed at any period of his life. Far less poetic in its color-scheme and chiaro-oscuro than the youthful portrait belonging to Mrs. Gardiner's collection, it is even more eloquent of the ease with which he managed his tools. Of a still greater charm, with subtler problems met and solved, is the portrait of Saskia van Ulenburgh, whom he married in Amsterdam in the year 1634, the probable date of the Cassel portrait. At all events the young woman carries in her hand a spray of rosemary, the symbol of betrothal, and her dress has the richness of a

Dutch bride's equipment. Here we see Rembrandt's art in perhaps its most delicate and psychologically interesting phase. The character revealed by the small pretty features has neither extraordinary force nor marked individuality. The lines are neither deep-cut nor broad. One is reminded of a fine little etching in which the plate has been bitten only to a moderate depth and which requires a sensitive handling in the printing to produce anything like richness. Yet the result is rich in the fullest sense of the term. It depends for its quality not only upon the splendid color-scheme formed by the dark red of the velvet hat and gown, the white of the feather, the gold and gray and dull blue of the trimmings and ornaments, the beautiful jewels, with which Rembrandt then as later produced an appearance of great magnificence, the bright red-gold of the hair falling lightly over the softly modeled brow, and the fair warm tones of the flesh glowing as from living health and physical energy: it depends as much upon the deep research into the expression that has resulted in the intimate portraiture possible only to genius and seldom found even in the work of the great masters, never, so far as the writer's observation has gone, in the work of their later years. The smile that hesitates at the corner of the whimsical little mouth, the tender modulations of surface on the forehead and about the straight-gazing honest eyes, the swift suggestions of movement and play

of mood in the flexible contours, the gaiety and sweetness and singular purity of the girlish face, are evoked with magisterial authority and precision. Never surely has there been a finer example of Dutch care and thoroughness in the observation and rendering of minute detail united to breadth of effect. The painting of the jewels and embroideries is wrought to a singularly perfect finish. It is almost as though the artist had set himself to extract the utmost beauty of which the textures of stuffs and gems are capable, to prove how much more enchanting was the beauty of the brilliant blond demure little face daintily poised above them. Dr. Bode calls the picture "one of the most attractive, not only of his early pictures, but of all his works."

To Rembrandt's early years also are ascribed certain careful studies of old men's heads and several portraits of younger men. Among these are one of the writing-master Copenol and one of the poet Krul, the former painted in 1632, the latter in 1633. The Krul portrait is the more striking of the two, and the pictorial costume with the broad hat casting its lucent shadow over the fine brow, the silken jacket with its gleaming reflections and the wide white ruffles at neck and sleeve on which the light blazes full, adds to the dignity and richness of the effect. It is easy, however, to agree with Dr. Voll in ranking the splendid portrait of an unknown man, of some



Courtesy of Berlin Photographic Company.

SASKIA

From a portrait by Rembrandt

five or six years later date, far above the Krul portrait in artistic quality. Although excessively warm in tone it has in addition to excellent construction and a lifelike aspect a nobility of bearing that imposes itself directly and irresistibly upon the spectator.

The portrait of Coppenol is not easily analyzed and Dr. Bode notes that the likeness to the authenticated portraits of the famous drawing master is not altogether convincing. Simpler and homelier in appearance than the portrait of Krul, this solid and even heavy figure seated comfortably in an armchair, the well-drawn hands busy with mending a quill pen, the glance reflective, but hardly thoughtful, the mouth under the small fair moustache slightly indeterminate, the head covered with short hair, the smooth fat face three-quarters in light, presents at first glance a commonplace aspect enough. But returning to it from the Krul or even from the more masterly later portrait, the spectator is certain to be deeply impressed by the quiet yet searching execution that takes account of every significant change in plane or outline in the large cheek and full chin. From the very commonplace of the pose and type one gains a special pleasure, since the power of the artist to irradiate an ordinary subject is the more clearly seen. The serene light enveloping the good head and falling gently on the background brings no thought of method or pigment to the mind, and the fleshlike quality

of the face and hands is as near imitation of reality as is possible within the bounds of synthetic art. It is easy to agree with Dr. Bode's opinion that the homely simple portraits painted in ordinary costume and under ordinary conditions of light during Rembrandt's first three years in Amsterdam are intellectually more worth while than the earlier more personal works. The theory is that he turned them out in competition with his contemporaries and eclipsed them on their own ground.

The portrait of "Rembrandt's Father in Indoor Dress," of the preceding year (1631), is in a quite different manner, and closely resembles the painting in Boston of an old man with downcast eyes, from the same model. The bald head and scanty beard, the wrinkled face and slightly uncertain mouth, are familiar to all students of Rembrandt's art. In 1631 Rembrandt was still in his father's house and one gains some notion of the old miller's amiability from the frequency with which he appeared in etchings and paintings and the variety of the poses which he took on behalf of his ardent son, adjusting his expression to his assumed character with no little dramatic skill. Never in his later years did Rembrandt so delicately render the patience and discipline of age. In this alert, unprepossessing yet kindly face we can read a not too fanciful history of the temperament of the sitter. We see, at all events, the mark of a sympathetic mind.

The next picture in the collection to mark a special period and one of brilliant achievement in Rembrandt's career is the so-called "Woodcutter's Family," belonging to the decade between 1640 and 1650. After an old fashion the Holy Family is represented as seen in a painting before which a curtain is partly drawn. The mother sits by the side of a cradle from which she has lifted the child who clings to her neck while she presses him to her in a close embrace. In the farther corner of the room is the figure of the father in his carpenter's apron, and in the center a cat is crouching near some dishes on the floor. The room is filled with a mild sunlight that filters through the air and falls across the figures of the mother and child and across the broad expanse of floor. The simplicity and poetic feeling in lighting and gesture are worthy of Rembrandt's prime, and there is no trace of the extreme drama that marks the religious compositions at Munich. The color is beautiful and the tone mysterious. Nevertheless one misses the precious quality of the earlier craftsmanship as it shines in such lovely paintings as the "Saskia" and the "Portrait of a Young Woman." In these the painter shows that he was still young, that he had arrived at a skill of hand that permitted him to use his medium with ease and certainty, but that he had not yet ceased to attempt what lay just beyond his powers. His brush still sought out subtle refinements of modeling with the patience that allied

him to the earlier Dutch and Flemish masters. He had, no doubt, the instinctive feeling of ardent youth, the assumption of time ahead for the carrying out of all projects, and his brilliant manipulations of his pigment showed neither haste, nor as yet the complete confidence that leaves untold the detail of the story for the imagination of the audience to supply. He was not ready to sacrifice everything else to that light and atmosphere of which he made his own world in his later years. Characteristic of his most winning use of this light that he created for his own purposes is the portrait of Nicholas Bruynningh, Secretary of one of the divisions of the Courts of Justice at Amsterdam: one of the most salient and brilliant of the Rembrandts in the Cassel Gallery. This portrait belongs to the year 1652 when the artist was about forty-five years old, and it is a superb example of matured genius. The subject offered an opportunity for daring handling and pictorial arrangement upon which Rembrandt seized with a full understanding of its possibilities. The beautiful gay face with its suggestion of irresponsibility glows from a mist of atmosphere that veils all minor detail, leaving in strong relief the mass of curling hair, the smiling dark eyes, the smiling mouth unconcealed by the slight moustache, the firmly modeled nose and pliant chin, with the tasseled collar below catching the point of highest light. It is the poetry of good humor, of physical beauty, of content with



Courtesy of Berlin Photographic Company.

In the Cassel Museum.

NICHOLAS BRUYNINGH
From a portrait by Rembrandt

life and life's adventures. It also marks what Herr Knackfuss calls Rembrandt's "softer manner" in which all sharp outlines of objects are effaced, and the lights gleam from a general darkness. More than "The Sentinel," which sometimes is given as the starting point for this departure in style, it has the appearance of a dramatic emergence from shadow. From having been a painstaking craftsman Rembrandt at this time had become a dramatist selecting from his material those elements best adapted to sway the emotions. He has lost himself—or found himself—in the expression of character; not merely character as one element in a picture's interest, but character as *the* element. In this picture of Nicholas Bruyningh we cannot escape from the merry careless temperament. We cannot as in the early portrait of Saskia linger in dalliance over charming accessories and beautifully discriminated textures until we reach by moderate degrees the eloquence of the profoundly studied face. Bruyningh's face is like the "*tirade*" of a French play—it is rendered at white heat and in one inconceivably long breath. Its significance is so intensified as to produce a profound feeling in a sympathetic spectator.

If we compare it with the badly named "Laughing Cavalier" of Franz Hals we see clearly enough the difference between drama and realism. Drama as defined by Robert Louis Stevenson consists not of incident but of

passion that must progressively increase in order that the actor may be able to "carry the audience from a lower to a higher pitch of interest and emotion." This also defines Rembrandt's painting at all periods. As one approaches the human face in his pictures one becomes aware of an emotional quality that is irresistible, and in a portrait like that of Bruyningh the emotional quality is almost isolated from incident or detail. It is the great moment of the third act when the audience holds its breath.

"The Standard Bearer" is not accepted by Dr. Bode as a fine work or even as certainly original, the version of the same subject in Baron G. du Rothschild's collection having made much deeper an impression upon him. The Cassel version is nevertheless a work of great distinction, the grave and beautiful face and shining armor looking out of a luminous atmosphere that has more of the Rembrandtesque quality than many authenticated works of Rembrandt's riper period. The work is engaging, personal, striking, and if not entirely great certainly possessed of many of the qualities of greatness.

While the Cassel collection does not contain any of the superb self portraits of Rembrandt's later years, the one example in this kind having authority without great interest, it does include one biblical picture of unusual importance belonging to the year 1656, the "Jacob Blessing his Grandchildren," which is, however, unfinished.

The square, direct brush strokes suggest those of Hals, the drapery is thinly painted with a flowing medium, the black shadows on the face of Jacob cut sharply into the half tones, there is little discrimination in the textures and the background comes forward. But the faces of the children are charming in characterization, recalling the simple tenderness of the "Girl Leaning Out of the Window" at Dulwich, one of the most enchanting embodiments of youth ever achieved by Rembrandt, and the woman, Israelitish in type, with large eyes and features rather abruptly defined, is an attractive attempt to realize feminine beauty, a task in which Rembrandt was never dexterous, however.

Of the two landscapes, that with the ruined castle is the most impressive, but neither compares favorably with the dainty perfection of the landscape etchings.

If we add to these examples the studies of old men's heads and the delightful portrait of the artist's sister holding a pink in her hand, we realize that the group as a whole covers many phases of Rembrandt's constantly changing inspiration. He betrayed in his later works the impatience of those to whom few years are left in which to complete their accomplishment, but he kept the sensitiveness of his youth well into his brief prime, although he transferred it from the field of form to that of light. It betrays itself in the quality of that light

which absorbs all that is ugly, coarse, or ultra real in its poetizing glamour. From the tender explicit craftsmanship of the wonderful Saskia to the golden mist enveloping the figure of Nicholas Bruynningh, is a long step, but not longer than many a painter has taken in his progress from youth to maturity. The special comment upon Rembrandt's character as a painter which we are able to gather from the Cassel pictures is that in casting off the trammels of particularity he did not become less receptive to poetic influences. He grew more and more a dreamer, and in losing the clear objective manner of his early portraits he substituted not the idle carelessness which in the work of a painter's later years is apt to be condoned as freedom, but the generalization that excludes vulgarities of execution and makes necessary increased mastery of the difficult craft of painting.

FANTIN-LATOIR

VIII

FANTIN-LATOURE

FANTIN - LATOUR was born in 1836, was the son of a painter, and was educated at Paris under his father's guidance and that of Lecoq and Boisbaudeau, professor at a little art school connected with the Ecole des Beaux-Arts. One of the most interesting painters of the little group in France whose work began to come before the public about the middle of the nineteenth century, a close friend of Whistler, a passionate admirer of Delacroix, and an inspired student of the old masters, he managed to preserve intact an individuality that has a singular richness and simplicity seen against the many-colored tapestry of nineteenth-century art. Rubens, Velasquez, Rembrandt, Franz Hals, and Nicolaas Maas, Pieter de Hooch and Vermeer of Delft, Watteau and Chardin, Van Dyck, Titian, Tintoret, and Veronese were his true masters and his copies of their works are said by his enlightened critic, M. Arsène Alexandre, to have a masterly quality of their own, to be far removed from the conventionality of facsimiles, and to bear upon an under-

lying fidelity of transcription an impress of individual sentiment. He sought to be faithful to the originals beyond external imitation, by seeking to render the original tone of the painting in its first freshness, as it appeared before time and varnish had yellowed and darkened it. He thus made himself familiar with the technical methods of the great periods of painting, and, coming into his inheritance of modern ideas and ideals, he was able to achieve a beauty of execution much too rarely sought by his contemporaries, although his intimate companions like himself frequented the Louvre with a considerable assiduity, spending upon the old masters the enthusiasm which they withheld from the later academic school of painting.

His earlier subjects were largely Biblical and historical. He then passed to domestic scenes and in 1859, 1861, and 1863 was painting his pictures of *Les Liseurs* and *Les Brodeuses* which showed the charming face of his sister with her sensitive smiling mouth and softly modeled brows, and later that of his wife. At the Salon of 1859 he and Whistler both submitted subjects drawn from family life, Whistler his *At the Piano* with his own sister and his niece, little Annie Haden, for the models, and Fantin his painting of young women embroidering and reading, only to have their canvases refused. Fantin was not, however, a martyr to his predilections in art. He early obtained admission to the Salon although he had enough rejected

work to permit him to appear among the painters exhibiting in the famous little "Salon des Refusés" of 1863. He received medals and official recognitions. But his modesty of taste led him to hold himself somewhat apart and exclusive among those who shared his likings. His portrait of himself, painted in 1858, shows a dreamy young man with serious, almost solemn, eyes, sitting before his easel, and looking into the distance with the expression of one who sees visions.

As a matter of fact he did see visions and attempted to fix them with his art. An ardent lover of music, he was eager to translate the emotions aroused by it into the terms of his own art. As early as 1859 he was in England, to which he returned in 1861 and 1864, and while there he was surrounded by a group of people who shared his enthusiasm for German music. There he first became familiar with Schumann's melodies, and made the rare little etching representing his English friends, Mr. and Mrs. Edwards, playing one of Schumann's compositions, Edwards with his flute and Mrs. Edwards at the piano. In 1862 he had the very tempered satisfaction of finding that Wagner, already beloved by him, had reached the public taste through the labors of the courageous Pasdeloup. "I always regret," he wrote to Edwards, "seeing the objects of my adoration adored by others, especially by the masses. I am very jealous when I love."

In order to celebrate Wagner's triumph over these masses, however, he at once made the lithograph called *Venusberg*, from which sprang the very different oil version of the same subject which together with the *Hommage à Delacroix*, the story of which M. Bénédict has recounted, was admitted to the Salon of 1864. Fantin's lithographs, a number of which are in the print room of the Lenox Library building in New York City, show clearly his pre-occupation with music, and an interesting article on this phase of his temperament appeared in the *Revue des Deux Mondes*, September 15, 1906. Naturally a worshiper, he did not confine himself to commemorating only the musicians who were his favorites. In lithography and painting he exalted such diverse heroes of the different arts as Stendhal, Hugo, Baudelaire, Delacroix, Manet, Schumann, Weber, Berlioz, and Wagner. In 1877 his enthusiasm for Wagner revived in his work, and compositions based on the Ring music followed each other in rapid succession. Wolfram gazing at the evening star, or following with enchanted eyes Elizabeth's ghostly figure as it moves slowly up the hill toward the towers of Wartburg; the Rhine maidens playing with rhythmic motions in the swirling waters, with Alberic, crouched in the foreground, watching them; Sieglinde, giving Siegmund to drink, as hounded and pursued he sinks at the door of Hunding's dwelling; the evocation of Kundry by Klingner;



In the Brooklyn Art Museum.

PORTRAIT OF MME. MAÎTRE
From a painting by Fantin-Latour

Siegfried blowing his horn and receding from the enticements of the Rhine maidens — these are among the subjects that engaged him. It would be difficult to describe his manner of interpretation. Quite without theatrical suggestion, it combines a dramatic use of dark and light and a feeling for palpable atmosphere hardly equaled by Rembrandt himself, with a remarkably certain touch. Nothing could better emphasize the value of technical drill to a poetic temperament than these imaginative drawings. In them Fantin gives full rein to his emotional delight in tender visions and twilight dreams. The lovely rhythm of his lines, the rise and fall of his sensitive shadows and lights that play and interplay in as strict obedience to law as the waves of the sea, his delicate modeling by which he brings form out of nebulous half-tones with the slightest touches, the least discernible accents, the accurate bland drawing, the ordered composition, the subtle spacing, the innumerable indications of close observation of life — all these qualities combine to give an impression of fantasy and reality so welded and fused as to be indistinguishable to the casual glance.

In spite of the assiduous study of Dutch and Italian masters, Fantin's work is characteristically French in both its fantasy and its realism. Not only the grace of the forms and the elegance of the gestures, but the sentiment

of the composition and the quality of the color, are undisguisedly Gallic. He is closer to Watteau than to any other painter but his firmer technic and more patient temperament give him an advantage over the feverish master of eighteenth-century idyls. His art throbs with a fuller life and in his airiest dreams his world is made of a more solid substance. For melancholy he offers serenity, for daintiness he offers delicacy.

His technique, especially in his later work, is quite individual in its character. He models with short swift strokes of the brush — not unlike the brush work in some of Manet's pictures. His pigment is rather dry and often almost crumbly in texture, but his values are so carefully considered that this delicately ruffled surface has the effect of casting a penumbra about the individual forms, of causing them to swim in a thickened but fluent atmosphere, instead of suggesting the rugosity of an ill-managed medium.

In his paintings of flowers he found the best possible expression for his subtle color sense. The letters written to him by Whistler in the sixties show how fervently these paintings were admired by the American master of harmony, and also how much good criticism came to him from his comrade whose enthusiasm for Japanese art already was fully awakened.

As a portraitist, Fantin was peculiarly fortunate. His

exquisitely painted flower studies, his pearly-toned beautifully drawn nudes, his lithographs with their soft darks and tender manipulations of line, his ambitious imaginative compositions, are none of them so eloquent of his personality as his portraits with their absolute integrity, their fine divination, and their fluent technique. The portrait which we reproduce is of Madam Maître, was painted in 1882, and was acquired by the Museum of the Brooklyn Institute of Arts and Sciences in 1906. It represents a woman of middle years with a sincere and thoughtful face and a quiet bearing. The felicities of Fantin's brush are seen in the way in which the silk sleeve follows the curve of the round firm arm, and the soft lace of the bodice rests against the throat and is relieved almost without contrast of color against the white skin. The touches of pure pale blue in the fan and the delicate tints of the rose are manifestations of the artist's restrained and subtle management of color, but above all there is a perfectly unassuming yet uncompromising rendering of character. There is nothing in the plain refined features that cries out for recognition of a temperament astutely divined. They have the calm repose that indicates entire lack of self-consciousness, no quality is unduly insisted upon, there is neither sentimentality nor brutal realism in the handling, the sitter simply lives as naturally upon the canvas as we feel that she must have lived in the world.

It is for such sweet and logical truth-telling, such mild and strict interpretation, that we must pay our debt of appreciation to Fantin, the painter of ideal realities and of actual ideals.

CARL LARSSON

IX

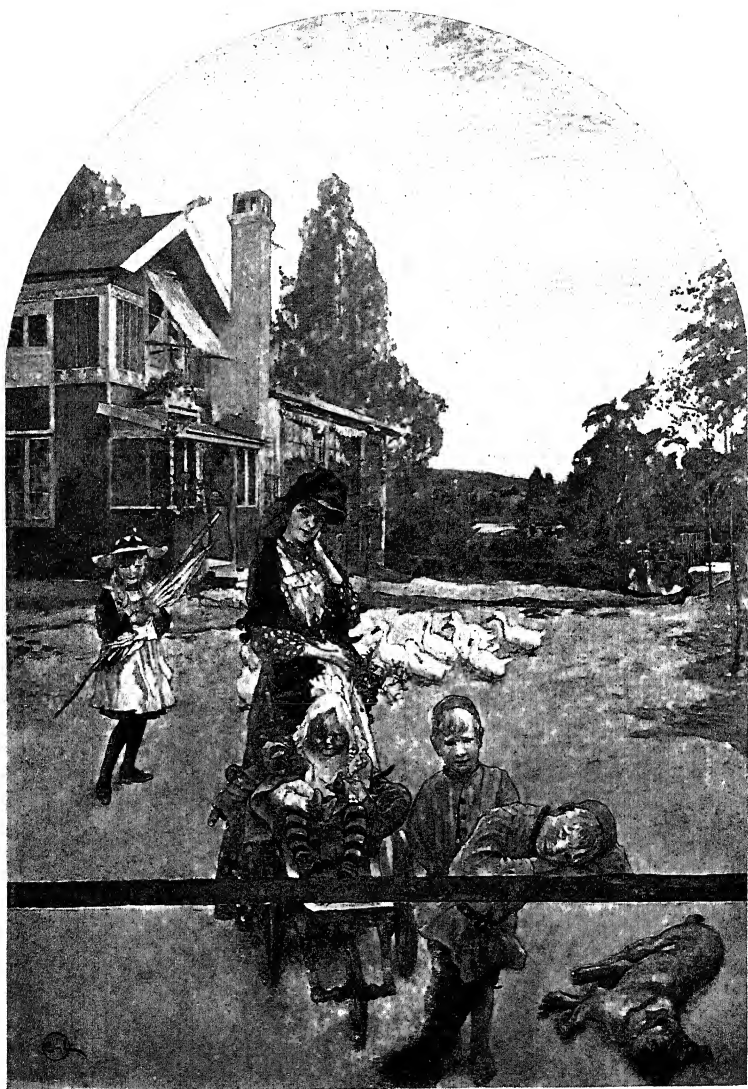
CARL LARSSON

THE accomplished Swedish critic, Georg Nordensvan, opens his monograph on Carl Larsson with the statement that the latter is unquestionably the most popular artist of the present day in his own country, and that he is equally popular as a man. It is not often that the personality of an artist seems so essentially connected with his work as in Larsson's case. His gay, pugnacious, independent, yet amiable temper of mind is so directly reflected in the character of his various production as to make a consideration of the two together an almost necessary prelude to any account of him. He has insisted upon expressing his individuality at whatever cost of traditional and conventional technique and he has at the same time unconsciously represented the frankest, most wholesome, and, on the whole, most characteristic side of the Swedish character. A rather daring and flippant humor enters into his paintings. One of his portraits of himself shows him standing, his happy reddish face aglow, against a yellowish-brown

wall. He is dressed in a long, yellowish-brown smoking frock, and holds in his raised hand a pencil from which appears to spring a little feminine figure supposed to represent his genius. "This figure carries what looks like a quantity of small round cookies," says his critic, "possibly to symbolize the adequacy with which his genius provides for his nourishment."

Another shows him with his little girl sitting on his head, maintaining her equilibrium by planting stout feet on his shoulders. The painter wears a house-jacket, loose slippers and baggy trousers, his face beams with good-humor; the child is brimming with laughter; the little scene is instinctive with the spirit of intimate domesticity, and the drawing, free and easy, without apparent effort in the direction of elegant arrangement or expressiveness of line, is nevertheless singularly nervous and vigorous.

In still another portrait, he is sitting before his easel, his little girl on one knee, his canvas on the other with the easel serving only as a prop. His eyes are turned toward a mirror which is outside the picture and the reflection in which he is using as a model; the child's eyes are fixed on the canvas watching the growth of the design. These are "self-portraits" in more than the usual sense. It is the rarest thing in art to find a painter representing his own aspect with such complete lack of



MY FAMILY
From a painting by Carl Larsson

self-consciousness. No characteristics seem especially to be emphasized, none betray exaggeration, there apparently is neither distortion nor idealization, nor is there any attempt to select a mood that shall preserve a favorable impression of the sitter. Nothing could, however, more favorably present a character to the critical scrutiny of strangers than this superb good faith. The least sentimental of us must recognize with frank delight the wholesome sweetness of the world these kindly faithful records open to us.

Larsson was born at Stockholm in 1853. From the age of thirteen he depended upon his own labors for support; retouching photographs at first. Later he entered the elementary school of the academy where he received honors. He drew from the antique and from the model and began to make drawings for illustration when he was about eighteen. The public knew him first through his drawings for the comic paper called *Kasper*, and he shortly became a much sought after illustrator for papers and books. The first book illustrated by him was a collection of stories by Richard Gustafsson, the editor of *Kasper*, the next was Anderson's "Tales." In the latter he succeeded Isidor Törnblom, who died in 1876 after having executed only a few drawings for the first part. He became bold and rapid in improvisation, and light and easy in execution

— qualities that he never lost. He was obliged to make of his academic studies a side issue, bread-winning taking necessarily the first place with him. No doubt it is to this necessity that he owes that prompt adaptation of his facility to various uses, that practical application of his freshly acquired knowledge which give to the simple compositions of his earlier period an especial spontaneity. He had no time to fix himself in ruts of practice. To draw from the Antinous one day and the next to press one's Greek outline into service for the representation of little dancing girls and happy babies is to effect that union between art and life which makes the first moving and the second beautiful; the union in which Daumier found the source of his prodigious strength. In his early years Larsson was anything but a realist. His fancy turned to unusual and vast subjects, and his natural impatience caused him to launch himself upon them with very inadequate preliminary study. The first canvas attempted by him during the study-time in Paris (time which he won at the Academy) was nearly ten feet high and represented a scene from the deluge with figures double life size. Naturally, he found himself unable to cope with the difficulties that promptly arose and was obliged to give it up. In 1877, when he was twenty-four years old, he painted a three-quarter length portrait of a woman standing, which was his best work of

that period. The genre pictures which he sent home to Stockholm at about the same time awakened little enthusiasm and spread the impression that he had no future as a painter and would be obliged to content himself with illustration. As an illustrator he became thoroughly successful, turning out a large amount of work and gaining for himself in Stockholm the very inappropriate name of "the Swedish Doré." He made enough money in this branch of art to try painting again in Paris, but with almost no success until the Spring of 1883, when he exhibited at the Salon a couple of small water-colors, the subjects taken from the field and garden life of Grez, a little painting village that lies south of the Fontainebleau forest. These pictures won a medal and were bought in Gothenburg. Other similar subjects followed, all distinguished, Nordensvan affirms, by the same pleasing delicacy of handling, the same glow and splendor of sunlight, and the same glad color-harmony. He now was in a position to marry, and pictures of family life presently appeared in great numbers. These are altogether charming — spirited, vivid, original, and full of an indescribable freshness and heartiness. Sometimes he painted his young wife holding her baby, sometimes he painted his two boys parading as mimic soldiers; sometimes it was his little girl hiding under the great, handsome dining-table; or a young people's party in

the characteristic dining-room, all the furniture and decorations of which are reproduced with crisp naturalism.

Not the least charm of his paintings lies in the beauty of these handsome interiors in which detail has the precise definition found in the work of the old Dutch artists. While Larsson's technique lacks the exquisite finish of a Terborch or Vermeer of Delft he tells almost as many truths about a house and its occupants as they do. If we consider, for example, the charming composition which he calls "The Sluggard's Melancholy Breakfast" ("Sjusofverskans dystra frukost") we find worthy of note not only the pensive and rather cross little girl sitting alone at the table with her loaf of bread and cup of milk, but also the long tablecloth with its handsome conventional design, obviously a bit of artistic handicraft since it is signed and dated above the fringe at one end, the decoration on the wall, possibly the lower part of a painted window, with its significant motto "Arte et Probitate"; the graceful pattern of the chairs, the big pitcher full of flowers and fruits, the plain ample dishes, the polished floor of the passage-way at the end of which a door opens on the green fields with a child's figure half-seen standing on the threshold, the fine rich color harmony of greens and reds and blues and browns held together by a subtlety of tone that involves no loss of strength.

His outdoor scenes are hardly less personal in their portraiture. There is the one called "Apple-Bloom" with a Larsson child in a pink sunbonnet clinging to the slim stem of a young apple-tree; in the distance some long low red buildings behind a board fence, in the foreground the pale green of spring grass; there is the one in which the larger part of the picture is filled with delicate field growth, thin sprays of pink, blue and white blossoms, and long slender leaves, at the top of the canvas a little thicket of trees with a small bright head peering between the branches; there is the one in which a baby lies on the greensward under the trees; each has an indescribable charm of individuality. Doubtless resembling a hundred other groves or meadows, these have an expression of their own distinguishing them from their kind. It is the genius of the close observer for discrimination between like things.

Whatever the subject, the treatment is always brilliant, frank and joyous. Larsson's brushwork is light and flowing; he has, indeed, a certain French vivacity of technique, but his motives and his personal point of view are so purely Scandinavian as to leave no other impression on the mind. Nor is he merely the painter of the Swedish type. He is the painter of intimate home life and character as found within his own walls. Hardly any other family in Sweden is known so well as his, and

the variety and enthusiasm of his mind lend spontaneity to these domestic pictures, so that one does not easily tire of the strong smiling creatures naturally and effectively presented to our vision.

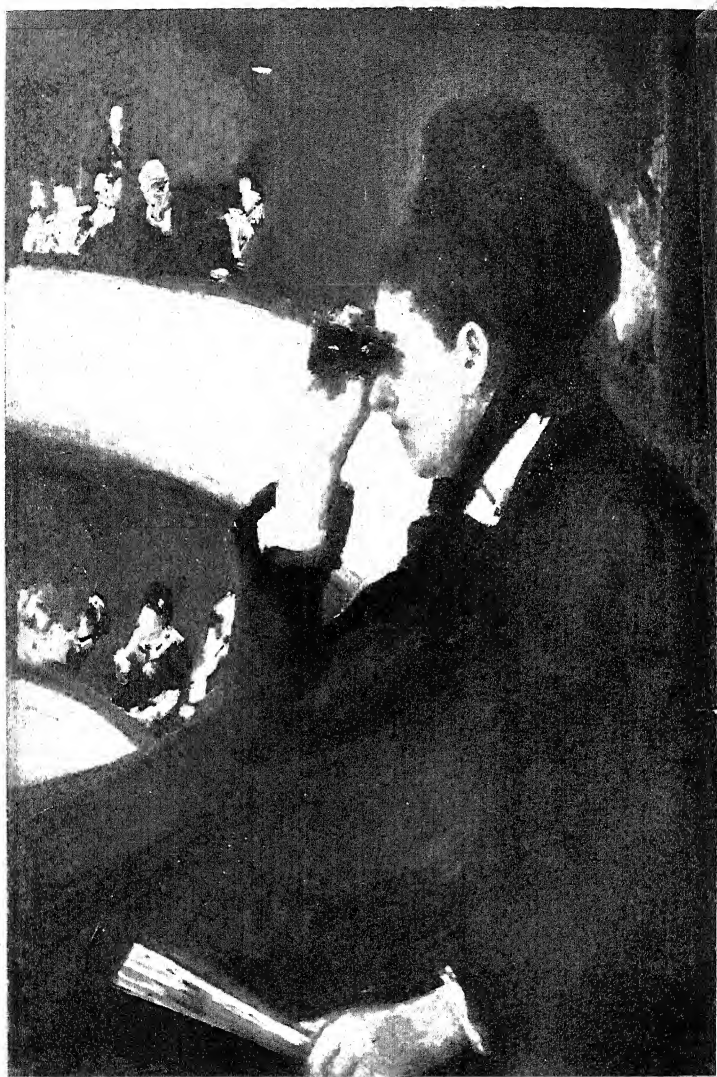
In the field of mural decoration also he has shown marked originality. Under the encouragement of Mr. Pontus Furstenberg, one of the foremost patrons of art in Sweden, he tested himself on a series of paintings for a girl's school in Gothenburg. He accomplished his task in a manner entirely his own, taking for his subjects typical figures of women in Sweden at different periods of history — a Viking's widow; the holy Brigitta; a noble house mother of the time of the Vasas, etc. — but although his manner of painting was free and blithe it hardly satisfied the most severe critics on account of its lack of architectonic qualities and the absence in it of anything like monumental simplicity. He has continued, however, to go his own way in mural decoration and holds to the principle that the walls should look flat and that the harmony of color and line should be balanced and proportioned with regard to decorative and not to realistic effect. His subjects are apt to be fanciful and are executed in a semi-playful spirit not in the least familiar to an uninventive age, as where the spirit of the Renaissance is represented by a young woman seated high on a step-ladder, looking toward the sky,



A PAINTING BY CARL LARSSON

with Popes and Cardinals seated on the rungs below gazing in adoration, while underneath them all yawns the grave filled with skeletons, from which the Renaissance has risen.

On the subject of home arts and handicrafts Larsson has emphatic ideas and urges on his compatriots the desirability of preserving their national types. "Take care of your true self while time is," he says, "again become a plain and worthy people. Be clumsy rather than elegant: dress yourselves in furs, skins, and woolens, make yourselves things that are in harmony with your heavy bodies, and make everything in bright strong colors; yes, in the so-called gaudy peasant colors which are needed contrasts to your deep green pine forests and cold white snow." He has made designs for haute-lisse weaving which were executed by the Handicraft Guild and which were practically open air painting translated into the Gobelin weave. In all that he does he is free from the trammels of convention; but his chief triumphs are in a field that is sadly neglected in modern art. As a painter of family life he is surpassed by none of his contemporaries.



DANS LA LOGE
From a painting by Mary Cassatt

JAN STEEN

X

JAN STEEN

JAN STEEN was born in Leyden about 1626, which would make him nineteen years younger than Rembrandt. He is said to have studied first under Nicolas Knüpfer and then possibly under Adriaen van Ostade in Harlem, and finally under Jan van Goyen at the Hague. In 1648 he was enrolled in the Painter's Guild at Leyden, and the following year he married Margaretha van Goyen, the daughter of his latest master. His father was a well-to-do merchant and beer-brewer and Steen himself at one time ran a brewery, though apparently not with great success. He incontestably was familiar with the life of drinking places and houses in which rough merrymaking was the chief business. Many of his subjects are drawn from such sources and his brush brings them before us with their characteristic features sharply observed and emphasized. He has been accused of a moralizing tendency and it may at least be said that he permits us to draw our own moral from perverted and unpolished facts. In his least re-

strained moments he is a kind of Dutch Jordaens, less exuberant, less sturdy and florid and gesticulatory; but with the same zest for living, the same union of old and young in any festival that includes good meat and good drink with song and dance and horse-play. If we compare "*Die Lustige Familie*" at Amsterdam with that ebullient rendering of the same subject by Jordaens entitled "*Zoo de ouden zongen: Zoo pypen de jongen*" that hangs in the Antwerp Museum, we have no difficulty in perceiving the points of similarity. There even are likenesses in the color-schemes of the two painters, Jordaen's silvery yellows for once meeting their match; but we find in Steen's picture a more subtle discrimination in the characters and temperaments lying beneath the physical features of the gay company.

Oftentimes Steen indulges in a gay and harmless badinage as different as possible from the bold and keen irony of his wilder themes. In "*Die Katzentanz Stunde*" of the Rijksmuseum at Amsterdam the laughing children putting the wretched little cat through a course of unwelcome instruction, the excited pose of the dog, the concentration of the girl upon her dance-music, are rendered with joyous freedom and animation, and suggest a childlike mood. The lovely *Menagerie* of the Hague is conceived in a still milder and gentler temper, the demure child among her pets, feeding her lamb, with

her doves flying about her head and the faithful little Steen dog in the background, is an idyllic figure. Indeed the entire composition has a tenderness and almost a religious depth of sentiment that make it unique among the painter's achievements. Another charming composition in which homely pleasures enjoyed with moderation and in a mood of simple merriment are delicately depicted is "*Der Wirtshausgarten*" in Berlin, in which the young people and their elders together with the happy dog are having a quiet meal under a green arbor. Family pets play an important part in all these scenes of domestic life; apparently Jan Steen even more than other Dutch painters was interested in the idiosyncrasies of the animals about him and was amused by incidents including them. His pictures gain by this a certain suggestion of kindness and community of good feeling that is refreshing in the midst of the frequent vulgarity of theme and sentiment. Reminiscences of the exquisite feeling shown in "*Die Menagerie*" continually occur in such incidents as a girl feeding her parrot, the play of children with the friendly dogs and cats of the noisy inn, and especially in the importance given to the expressions and attitudes of the dumb creatures. The dog is nearly always in the foreground, invariably characterized with the utmost vivacity and clearness, and usually playing his cheerful part in whatever of lively occupation his

masters are engaged in. In "*Die Lustige Familie*" he joins his voice to the family concert with an expression of canine agony.

Frequently the subjects are obviously drawn from the life of his own family circle and the portraits of his children in these canvases are always sympathetic and delightful, giving a peculiarly intimate character to the artist's works in this kind. In "*Das Nikolausfest*" at Amsterdam the little girl in the foreground — apparently the little Elisabeth born in 1662, who figures in so many of the later paintings — is a particularly engaging figure.

These simpler "feasts" and family gatherings in which gay laughter reigns in place of brawling, constitute a delightful phase of Steen's art, yet curiously they are seldom as beautiful in their esthetic qualities as the tavern scenes and incidents of low and vicious life. The picture in the Louvre, however, "*Das Familien Mahl*," contradicts this generalization in the sheer loveliness of color, in the light that streams through the window hung with vines, and in the delicately discriminated textures of the gowns and furnishings. In this picture the figure of the woman nursing her child in the background has an amplitude of line and graciousness of pose that places it on a plane with Millet's renderings of similar subjects, while the painting in itself is of a quality never achieved by the poetic Frenchman.

Occasionally we find compositions by Steen in which only two or three figures are introduced, although as a rule he crowds every inch of his canvas with human beings and still-life. A very beautiful example of these compositions is seen in "*Die Musikstunde*" of the National Gallery, London. The daintiness and innocence of the young girl's profile, the refinement of the man's face, and the enchanting tones of the yellow bodice and blue skirt make of this picture a worthy sequel to "*Die Menagerie*."

Another composition of two figures is "*Das Trinkergesellschaft*" in the Rijks Museum at Amsterdam. A woman is drinking from a glass, and a man standing at one side holds a jug and looks at her with an expression of concern. The painting of the woman's right hand which she holds to her breast is delightful and so is the clear half-tone of her face. An attractive one-figure composition, also in the Rijks Museum, is "*Die Scheuermagd*," a scullery maid scouring a metal pitcher on the top of a cask. The discriminations of texture in this picture, the wood and metal surfaces, the cotton of the woman's blouse, the rather coarse skin of her bared arms and the more delicate texture of her full throat, are especially noteworthy. Several compositions in which two or three figures are grouped are variations of one theme, an invalid visited by her physician. In several instances

the title, the rather lackadaisical expression of the lady, and the significant glances of her companions, indicate that love-sickness is the malady. The color in these pictures is usually beautiful and the types are cleverly differentiated, the entire story becoming apparent to the spectator by particularities of gesture and feature, neither exaggerated nor emphasized unduly, but acutely observed and rendered at their precise value in the expressiveness of the whole. A very fine example of these "*Doktorbilder*" is in the collection of the New York Historical Society. The doctor is bleeding his patient, and there are several people in the room. The rich costumes are distinguished by the indescribable blond yellows and silvery blues that make Steen's color harmonies at their best singularly delicate and blithe.

Among the compositions in which many figures in a complicated environment tax the artist's technical skill to the utmost, are several representations of the bean feast, that saturnalia of Germany, upon which abundant eating and drinking are in order. One of the most beautiful of these pictures is in the Cassel Gallery. Steen himself, portly and flushed, sits at the table, grimacing good-naturedly at the racket assailing his ears. His handsome wife is in the foreground, her large free gesture and unrestrained pose bringing out the opulent beauty of her form draped in shining silken stuffs. Her face,

turned toward the little urchin who has found the bean in the cake and thus won the right to wear a paper crown as king of the revels, is dimpled with smiles. The two children are babyish in figure and expression and the little dog is more serious than is his wont upon these occasions. A couple of men are making a din with bits of brass and iron, and the place is in complete disorder with eggshells and kitchen utensils scattered about on the floor, yet the aspect of the scene is curiously removed from vulgarity. Both beauty and character have been ideals of the artist. He has not only grasped the loveliness of external things but he has delved rather deeply into the individualities of these roistering Hollanders. You do not feel as you do with Jordaens that excess of flesh and the joys of the palate are all the world holds for the revelers. The world holds, for one thing, appreciation of rich accessories. The columned bedstead, the handsome rugs, the carved furniture, the glint of gold in the ornate picture frame, especially the sheen of the silk skirts, the soft thick velvet and fur of the sacques and bodices, these, while they are not uncommon in the Dutch interiors of the period combine to produce an impression of esthetic well-being that tempers the unctuous physical satisfactions of a merry-making class. With Jordaens it is the satyr in man that sets the standard of enjoyment, except in his religious pictures which often

are filled with genuine and noble emotion, and in which he rises superior to Steen where the latter works in the same kind. Nothing could be more commonplace or characterless in color and form than Steen's rendering of the dinner at Emmaus. Occasionally, however, he is equally without inspiration in his lustiest subjects. In the "*Frohliche Heimkehr*" at Amsterdam, a merry enough scene of people returning from a boatripe in high spirits, there is neither charm of color (save in the yellow jacket of a girl who leans over the side of the boat) nor subtlety of characterization.

Fully to appreciate Steen, we should know his pictures in the Louvre and at Amsterdam. They cover a wide range and comprise a considerable number of masterpieces. The life he depicts in them is not of a very high order, but he has seen the possibilities for pictorial representation in his surroundings as almost no other painter of his time. His people are alive and their living is active and fervent. What they do they do with zest. There is energy in the painter's line and vitality in his color. Nothing is dull or tame in his family drama. All has a touch of moving beauty. In the "*Schlechte Gesellschaft*" of the Louvre or the more vulgar "*Nach dem Gelage*" of the Rijks Museum — least rewarding of pictures for the moralist — how rich in beauties of color and line is the composition, how tender in modeling are

the forms, how bewitching to the eye the fine enamel of the surface!

In the Metropolitan Museum, in New York, is one characteristic example: "The old rat comes to the trap at last," which badly needs cleaning, and one new purchase attributed to Steen in the lists of his work but hardly typical or even characteristic. The subject is a kitchen scene. In it we have neither Steen's charm of color nor his perfection of finish. Yet the turn of the woman's head, the unaffected merriment of her expression and that of the youth, and the type to which her face belongs sufficiently recall such examples of the artist's work as "*Das Galante Anerbieten*" at Brussels with which indeed it has more in common than with any other of Jan Steen's pictures known to me.

Steen's own portrait, painted by himself and hanging now in the Amsterdam Museum, shows a face upon which neither wild living nor ardent toil has left unhappy marks. His serious eyes look frankly out from under arched brows. His mouth is firm though smiling slightly. The high, bold nose and strong chin, the well-shaped head and thoughtful brow indicate a character more decided and more praiseworthy than the legends adrift concerning his life would lead us to expect in him.

ONE SIDE OF MODERN GERMAN PAINTING

XI

ONE SIDE OF MODERN GERMAN PAINTING

THE best substitutes for the judgments of posterity are the judgments of foreigners. A group of pictures by the artists of one country, taken to another country for exhibition and criticism, is subjected to something the same test as the pictures of one generation coming under the scrutiny of another generation.

When a collection of pictures by modern German artists was exhibited in America in 1909, the American people were prompt in their recognition of a certain quality which they termed national. The critics—many of them—saw this quality from the adverse side and were far from complimentary to the Germans in their comparisons between American art and German art, but a general impression was given of a vitality sufficiently marked to make itself felt by the least initiated observer. A number of the pictures by the older men had little enough of this vitality, but where it existed it was so decided as to leaven the mass. And there was almost none of the sentimentality characterizing the Teutonic ideal as it

had manifested itself in the pictures formerly brought to this country.

Compared, then, with the paintings of American artists and with those of the Frenchmen, whose work we have known so much better than that of any other country, compared also with the work of the modern Spaniards, whose paintings were on exhibition the same winter at the Hispanic Museum, we find the special character of the German painting to exist in a resolute individualism, a determination to express the inner life of the artist, his temperament and predilections and his mood at whatever cost of technical facility. Expressiveness, getting the idea into circulation, getting something said, this appears to be the common goal of the German painter of the present day.

In such case, of course, the idea is of particular importance. If it is to take precedence over purely esthetic qualities it is reasonable to expect it to be an idea of no little importance. Let us examine some of the painters represented in the exhibition arranged for America, and see whether in most cases the idea is emotional as with the artists of China and Japan, and therefore peculiarly appropriate to translation by rhythms of line and harmonies of color, or intellectual, and therefore demanding a complex and difficult expression and the solution of technical problems that do not come into the question at

all when nothing else is required than to evoke an especial mood or temper of soul.

The oldest of the painters represented was Adolf von Menzel, who was born in 1815 and died in his ninetieth year. As he began work at an early age his accomplishment practically covers the period of the nineteenth century. He has been designated by one of his German critics as three Menzels in one: the first, the historian of the Freiderician period; the second, the historian of his own time, recording the court life in which he played his part; the third, the acute observer of the life of the streets and workrooms and a commentator on the amusing details of the passing show.

A number of his sketches were shown at the exhibition, a couple of landscapes, a ballroom scene and a theater subject, beside a little mediaeval subject in gouache. These displayed his dexterity of hand which was truly astounding, and also his memory, as the "Théâtre Gymnase" was painted fully a year after he left Paris. The ballroom supper was painted in an ironic mood and the gluttony of his fellow humans, their unattractive personalities, their curious aspect of the educated animal, appear with an intense and pitiless fidelity to the fact which is of the essence of intellectual realism, but which could equally have been achieved through the medium of words. In spite of a cultivated color sense and a fine control

over his instrument he was from first to last essentially an illustrator. It was difficult for him to omit any detail that would add to the piquancy or fulness of his story, however much the omission might have done for his general effect. He said himself, "There should be no unessentials for the artist," and he advised his pupils to finish as much as possible and not to sketch at all. This passion for completeness rarely accompanies a strong feeling for the romantic aspects of nature or for atmospheric subtleties. Neither does the painter who observes human nature closely and represents it with a detailed commentary upon its characteristics usually convey the impression of any subjective emotion.

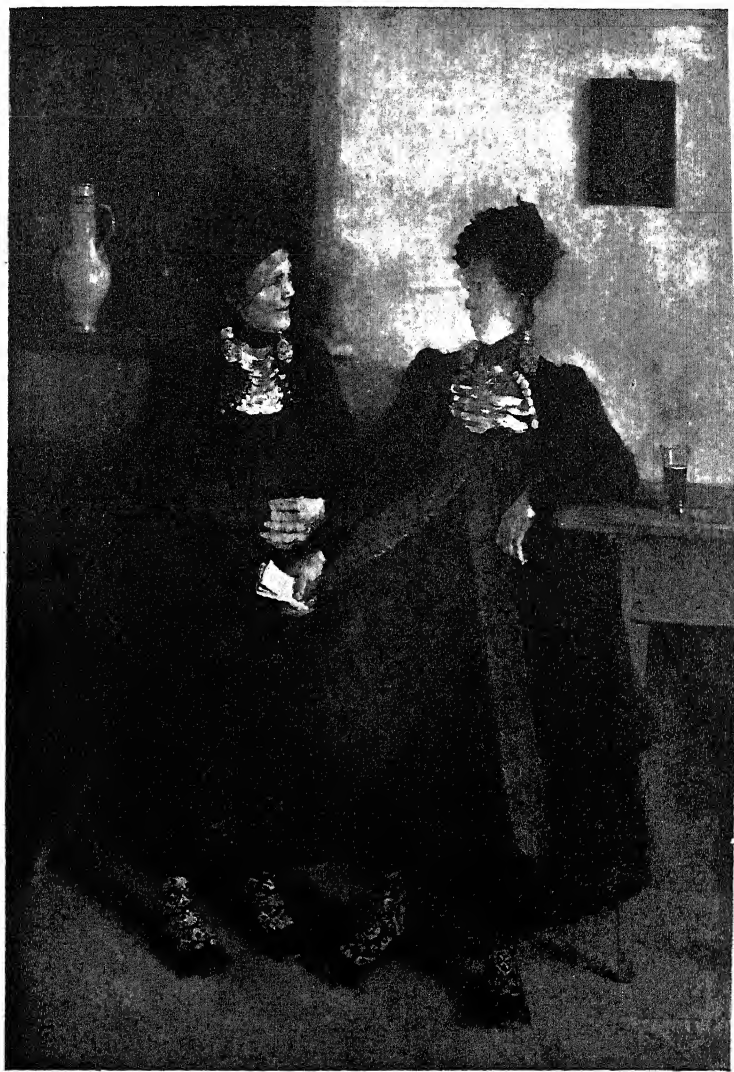
Menzel is no exception to this rule. In his work he appears as emotionless as a machine, but his accomplishment is not mechanical. It is, on the contrary, the record of a busy, highly individualized, accurate mind. A Berlin man, he had the alertness, the clear-cut effectiveness, the energy, and the coldness typical of a cosmopolitan product. If we compare his "Ball Supper" in which the glare of lights, the elaboration of costume, the rapacity and shallow glittering superficiality of a Court festivity are presented almost as though in hackneyed phrases, so devoid is the picture of any meaning beyond the obvious, with the "Steel Foundry" in which the unsentimental acceptance of labor as a necessary factor in civilization

is conspicuous, it is clear that his mind was free from dreams and visions whichever side of society he looked upon. In this respect his influence is salutary. It is like a cool and wholesome breeze blowing away all miasmic vapors, and there is a positively exhilarating quality in his firm assumption of the power of the human being over his material. His workmen are men of strong muscle and prompt brain. In the "Steel Foundry" we see their efficient handling of the great bars of metal with admiration as we should in life, and we note what in modern times is not always present for notation, the intelligence and interest in their faces. In one corner of the room, behind a screen or partition, a little group is devouring luncheon. Here we strike once more the note of the ball-room supper in the munching eagerness of the eaters, but seen in juxtaposition with the physical force and effort of the workers it ceases to be revolting, and seems to symbolize the lusty joy of living with a sympathetic zest of realization.

In all of Menzel's work we have this sense of physical and mental competency. It shows nothing of the abnormal or decadent, and it must also be admitted that only in a few instances does it show anything of esthetic beauty. He was able to paint crowds of people and he managed to get a remarkable unity of effect in spite of his devotion to detail, but his masses of light and shade are not

held in that noble harmonious relation achieved by the peasant Millet who was Menzel's contemporary, his lines have no rhythmic flow, his color, though often charming, is seldom held together in a unified tone. Some one has called him "the conscience of German painting," but he is more than that. He is both conscience and brain. It is always possible to obtain an intellectual satisfaction from his point of view. What is lacking is emotion.

We feel this lack in other Berlin masters. Professor Max Liebermann is one of the most distinguished of the modern group, and his large, cool, definite art is innocent of the moving quality. He was represented in the exhibition by a portrait of Dr. Bode, a vigorous little composition called "The Polo-players," the "Flax Barn at Laren," and "The Lace Maker." The last two were especially typical of his steady detachment from his subject. The old lace maker, bending over her bobbins, suggests only absorption in her task. There is no ennobling of her form, no idealizing of her features, no enveloping of her occupation with sentiment, nothing but the direct statement of her personality which is neither subtle nor complex and the description of what she is doing. But she is intensely real, more real, even, than Menzel's closely observed individuals. Liebermann, born in 1847, was the leader of the new tendency characterizing the Germany of the seventies, the tendency toward con-



Courtesy of Berlin Photographic Company.

PEASANT WOMEN OF DACHAUER
From a painting by Leibl

stant reference to nature as opposed to the old-fashioned conventionalism and Academic methods. There could have been no safer leader for a band of rebels since he was the sanest of thinkers and worked out a style in which the classic qualities of nobility in the disposition of lines and spaces and remarkable purity of form played a prominent part.

Observing his "Flax Barn," in comparison with the work of his compatriots, its fine freedom from triviality of detail was apparent, and the beauty of its cool light, spread over large spaces and diffused throughout the interior of the low shed, made itself felt. One noted also, as elements of the picture's peculiarly dignified appeal, the severe arrangement of the figures with the long row of workers under the windows, the long threads of flax passing over their heads to the women in the foreground, and the almost straight line formed in turn by these women. The composition, quite geometrical in its precision, gave a sense of deep repose in spite of the vitality of the individual figures and the impression they made of being able to turn and move at will, an impression nearly always missed by Leibl, Liebermann's great forerunner in the painting of humble life. We get much the same austere effect from the almshouse pictures of old men and women on benches in the open square, always arranged in a geometrical design, and always calm in gesture and mild

in type, which appear from time to time in the foreign exhibitions of Liebermann's work.

Liebermann has done for the Germans something of what Millet did for the French. He has built his art upon the daily life of the poor, but while, like Millet, he has introduced a monumental element into his work, it is clearer, more closely reasoned, more firmly knit than Millet's art, and at the same time less emotional. Liebermann's hospitality to purely technical ideas, his interest in problems of light and air, his diligent analysis of motion, his ability to translate a scene from the life of the laboring class without sentimentality, without prettiness or eloquence or any of the attributes that catch the multitude, give to his art a touch of coldness that is not without its charm for those who care for a highly developed orderly product of the mind.

Most of the Berlin men who are in any degree notable share somewhat in this attribute. Arthur Kampf, although he has less than Liebermann of cool detachment, has both elegance and gravity. He could hardly have had a better representation by any one or two canvases than by the "Charity" and the "Two Sisters" of the American exhibition. In the first he depicts a street scene with its contrasts of poverty and wealth. A man and woman in evening dress, returning from their evening's pleasure, are besought by poor people clustering around a soup

stall and drop coin into the insistent hands. The smoking caldron of soup in the center and the circle of sharply differentiated faces form an admirable composition, the apparently accidental lines of which play into a dignified linear scheme. The "Two Sisters" reveals the influence of Velasquez in its flat modeling and subtle characterization, and in its atmospheric grays enlivened with geranium reds. Both of these pictures indicate a modern temper of mind in the fluency of their technique and the realism of their treatment together with the attention paid to the tonal quality and to the character of the space composition. Kampf, however, although a young man — he was born in 1864 — has passed through many phases of development which are recorded in his many-sided art. His subjects range from the historical themes of his wall decorations at Magdeburg and Aachen through portraiture in which he grasps characters essentially diverse and suggests with unerring instinct the dominant quality, scenes of labor as in his "Bridge-Building," scenes of brutality and excitement as in his "Bull-fight," scenes from the drama of the Biblical story, scenes of domestic life as in his delicately humorous picture of the absorbed reader eating his breakfast with the morning paper propped up in front of him, and scenes of peaceful holiday-making among the poor as in his idyllic "Sunday Afternoon" which shows a peasant boy playing his

harmonicum under the trees, with his old father and mother sitting by in placid enjoyment. Various as these pictures are and closely as the manner has in each case been adapted to the special subject, we nowhere miss the note of individuality, although in such a portrait as that of the Kaiser, which was shown in America, it unquestionably is subdued. Neither do we miss the note of locality. Born at Aachen, Kampf is a true Rheinlander and one of his German critics notes that we must look to this fact for the explanation of his special qualities, declaring that without the Rheinlander's cheerfulness and energetic temperament, and without the background of the ancient Rhenish culture, he would be inconceivable. On the other hand his turning to drama and romance for his inspiration speaks of his Duesseldorfian training and his realism of representation allies him to Menzel. At forty-two he was made president of the Royal Academy of Art in Berlin, and it is probable that the wholesome Rhenish energy of which his critic speaks will save him from sinking into the formalism of the academic tradition.

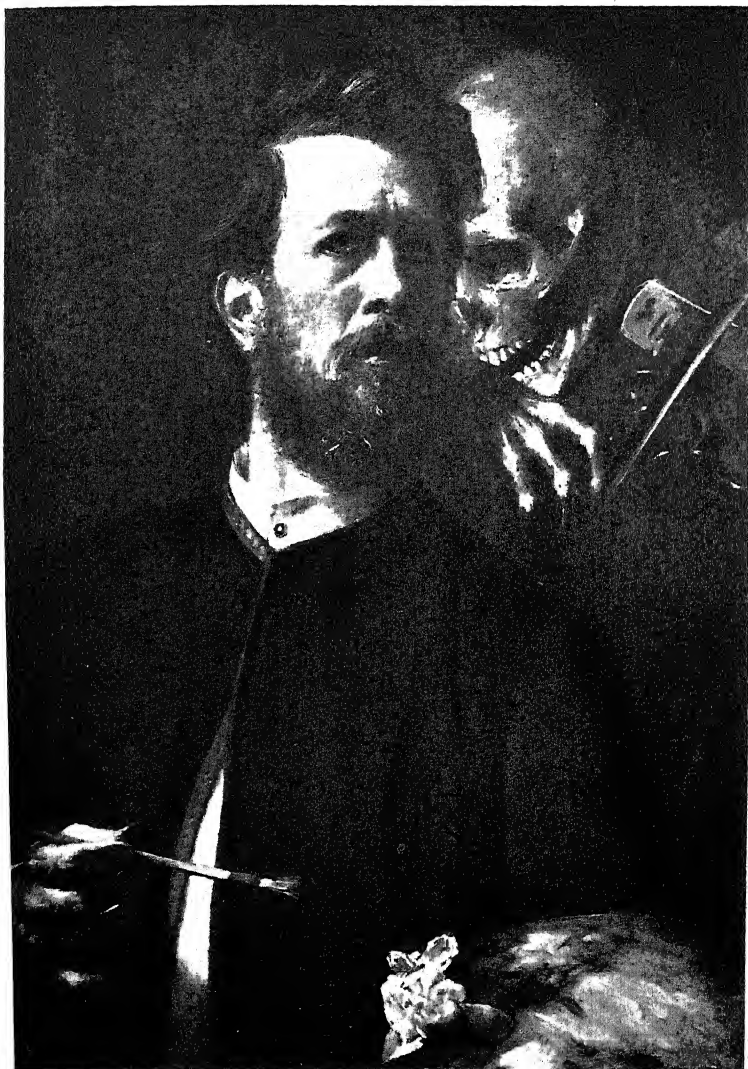
In his art, however, as in that of his compatriots, it is apparent that the world of ideas is the world in which he lives, and he works to express his mind rather than his soul, his thoughts rather than his emotions, if we follow

the indefinite and arbitrary division between thought and feeling that does service as a symbol of a meaning difficult to express clearly.

There were other interesting painters represented in the Berlin group at the American Exhibition, Otto Engel, Fritz Berger, Hans Hartig — and of all it is more or less true that the idea in their work is more important than the feeling. It is true also that the tradition of the peasant Leibl, a great painter, but invariably cold, rests upon most of them. His wonderful manipulation of pigment is equaled by none of them, but his accurate, detached observation, his balanced rendering, the firmness of his method, have entered more or less into their scheme of art. And it is to be noted that his ideas and theirs are ideas appropriate to the painter's medium. Menzel's literary bent is not shared by them, his predilection for a story to illustrate almost never appears among the younger Berlin painters, and he cannot in any real sense be considered their prototype.

When we turn to the older members of the modern Munich school we find the influence of Boecklin dominant. Arnold Boecklin, a Swiss by birth, and possessed of the Swiss ingenuity of mind, has been the subject of endless discussion among the Germans of the present day. He exhausted his very great talent in painting a symbolic world, and by his appreciation of the value of

coherence he made his paintings impressive. They are each a perfectly coherent arrangement of parts, making a whole which has the appearance of simplicity, however numerous the elements composing it may be. By a combined generalization and intensity he turned the actual world which he studied closely enough, into his own unreality. Thus, in his Italian landscapes, he reveals the architectonic structure of his scene stripped of all incidental ornament, the upright and horizontal lines left severe and uncompromised, and the blue of the heavens and the sea, and the dark green of the cypresses, pushed to an almost incredible depth. Everything is more significant than in nature, yet nature has provided the elements of significance. It is in his ability to see things whole and to co-ordinate the selected details that Boecklin is most an artist. This largeness of generalization gives him power over the imagination, and is, perhaps the only, certainly the chief source of his power. His color by its very intensity overdoes the intended effect. The imagination instead of being stimulated is sated, and his obvious symbolism fails to pique the curiosity. Moreover, his handling of paint lacks sensitiveness. He has something of the disregard shown by the English painter Watts for the beauty inherent in his material which might as well be clay or textile as pigment in his hands. But his appreciation of the effect upon the mind of noble arrangements



FIDDLING DEATH

From a portrait by Arnold Böcklin

of space and mass raises him to a much higher place as an artist than he can be said to occupy as a painter.

Franz von Stuck is Boecklin's most distinguished follower. When we turn from the examples of Boecklin's work, by no means the most impressive examples, exhibited in America, to Stuck's "Inferno" we perceive both the influence of Boecklin and the powerful individuality that mingles with it.

There is Boecklin's insistence upon the symbol, and upon the bodying forth of things unseen, there is the solid violence of color, there is the pompous statement of the half-discerned truths which more sensitive artists are content to whisper. But there is also a splendid arabesque of line and a deeper reading of the spiritual content of the subject.

If we compare Stuck with William Blake whose fancy also was haunted by Dantesque conceptions, we see how much more impressive Blake's visions of the unreal world are and we find the reason in their swift energy of conception and in the artist's tenacity in holding his conception. With both Boecklin and Stuck we feel that the manner of rendering the conception becomes more important than the initial conception, and this seldom, if ever, is true of Blake. In spite of Boecklin's superb restraint in the disposition of his masses, when it comes to color he is at the mercy of the material pigment and permits it to

obliterate where it should enhance and reveal. His forms, also, and even more than Stuck's, lose vitality under the weight of significance forced upon them, while Blake's emerge from the blank panel clean and strong and unencumbered. We feel that Blake, with all his struggle to utter truth by means of symbol, never allows his mind to lose the idea that "Living form is eternal existence," but in Boecklin's pictures "living form" is often buried beneath his colored clays.

Thus we see that it cannot truly be said of him and his followers that the idea is of first importance to them. It is their material that is of first importance, otherwise they would learn so to subordinate their material as to support and disclose their idea. This is the more obvious that their idea is emotional and therefore perfectly suited to expression through the medium of art. Liebermann's ideas although they are intellectual are not of a kind that cannot appropriately be translated into pictures, and his respect for them leads him to fit his manner of expression closely to their requirements. Like Leibl he is a painter and a thinker in one, and the faculties of the two work in complete coordination.

Painters of Boecklin's type, on the other hand, wish to produce in the observer a strong emotion, but they become slaves to their medium because their own emotion is not sufficiently powerful to conquer their minds, which be-

come diverted by the colors and forms they produce. One of Blake's swift upward soaring lines has more power to carry the imagination heavenward than all the versions of Boecklin's "Island of Death."

Against Boecklin's followers, whose minds are more or less befogged by their lack of appreciation of paint as a means to an end, we must place Wilhelm Truebner who is a clear thinker and a great painter, with more warmth than Liebermann and with a reticent color sense, a feeling for expressive form, a love of reality, and no apparent desire to re-invent the grotesque. His elegance of line in itself sets him apart from most of his compatriots, and his knowledge of how to extract from his color scheme its essential beauty is greater than that of most modern painters, whatever their nationality. His blacks have the depth and luster without unctiousness characteristic of black as the great colorists use it, and in his touches of pale refined color enlivening a black and white composition, we have the delightful effect so often given by Manet, as of a bunch of bright flowers thrown into a shadowy corner.

If young Germany were content to follow in Truebner's footsteps we should soon have a revival of the ancient craftsmanship and conscience that animated Holbein and Dürer. Young Germany, however, has other plans. To learn of them the reader is referred to Meier-Graefe's

comprehensive and stimulating volume on modern art. The only representation of the painters of the immediate present given in the American exhibition was confined to the Scholle School, which, however, indicates clearly the creative impulse that is stirring in the younger painters. "A warlike state," Blake wrote, "never can produce Art. It will Rob and Plunder and accumulate into one place and Translate and Copy and Buy and Sell and Criticize, but not Make." This has been true of the Germans, but the present generation is bent upon making and it is natural that the strongest impulse toward originality should come to the Munich painters rather than to the cosmopolitan Berlin men.

The Scholle is a Munich association consisting of a group of young men who, taking the humble and fecund earth as their symbol, as the title of the society implies, seek to get into their painting the vigor and intensity of life and force which devotion to the healthy joys provided by our mother Earth is supposed to engender.

They are like the giant Antaeus whose strength was invincible so long as he remained in contact with the earth, but who easily was strangled when lifted into the upper air. Their strength also melts into helplessness when confronted by problems of atmosphere and the delicate veils of tone which enwrap the material world for the American painter.

But the energy of these young Germans in their own field is something at which to wonder. They remind one of their critics of a band of lusty peasant boys journeying in rank from their University to the nearest beer garden, singing loud songs by the way. Leo Putz, Adolf Muenzer, Fritz Erler, are the leaders of the group, although Alex Salzmänn and Ferdinand Spiegel were Erler's collaborators in the famous Wiesbaden frescoes which offended the taste of the Kaiser. These young men are entirely capable of offending a less conventional taste than the Kaiser's, but they all are doing something which has not been done in Germany for many a long year; they are busying themselves with the visible world and painting frankly what they see. It does not matter in the least that in their decorative work they give rein to their fancy and produce such symbolism as we find in Erler's "Pestilence," or that in the illustrations for *Jugend* they tell a story with keen appreciation of its literary significance. Their eyes are open upon the aspect of material things and they paint flesh that is palpitating with life, forms that live and move, and color that vibrates.

Here again as with Liebermann and Truebner the idea and the execution are in harmony, but with the Scholle painters the idea is apt to be a very simple one, depending upon straightforward representation for its impressiveness. Above all it reflects the national temper of mind,

for all these individualists are German to the core and not to be mistaken for any other race.

One characteristic of this national temper is directness. Not necessarily simplicity, of course, since the German painter as well as the German writer has frequently complex thoughts to express and uses corresponding elaborations of expression. But he does not often say one thing while seeming to say another; he does not often give double and contradictory meanings to the same subject. He does not present for your contemplation the disheartening spectacle of sophistication masquerading as innocence, or duplicity masquerading as frankness. To that extent he is an optimist, however deep his native pessimism may go in other directions.

There is, for example, a picture by the French artist Jacques Blanche, entitled "Louise of Montmartre," and known to many Americans, in which the girl to whom Paris irresistibly calls is shown in her boyish blouse and collar, her youthful hat and plainly dressed hair, in a nonchalant attitude, pretty and plebeian, with honest eyes, yet revealing in every line of her frank and fresh young face the potentiality of response to all the appeals made by the ruthless spirit of the city. It is impossible to discern at what points the artist has betrayed that artless physiognomy in order to reveal the secrets of temperament, but the thing is done,

It is not what the German is interested in doing. His imagination works subjectively, giving form to his own conceptions, rather than objectively or as an interpreter of others. Hence the downright, and, in a sense, confiding aspect of so much of this brave art. Hence, also, its affinity with the American spirit, for the American still bends a rather unsuspecting gaze upon life and accepts character and temperament as they choose to present themselves. The German, however, is articulate and ratiocinating where we are more purely instinctive. We are not inclined to reason about our moods and we seldom are able to express them in our literature. In our art, on the other hand, especially in our landscape art, we manage to translate our subtlest emotion. We are able to suggest what is too delicate for analysis, and in this we stand almost alone in the painting of the present day.

TWO SPANISH PAINTERS

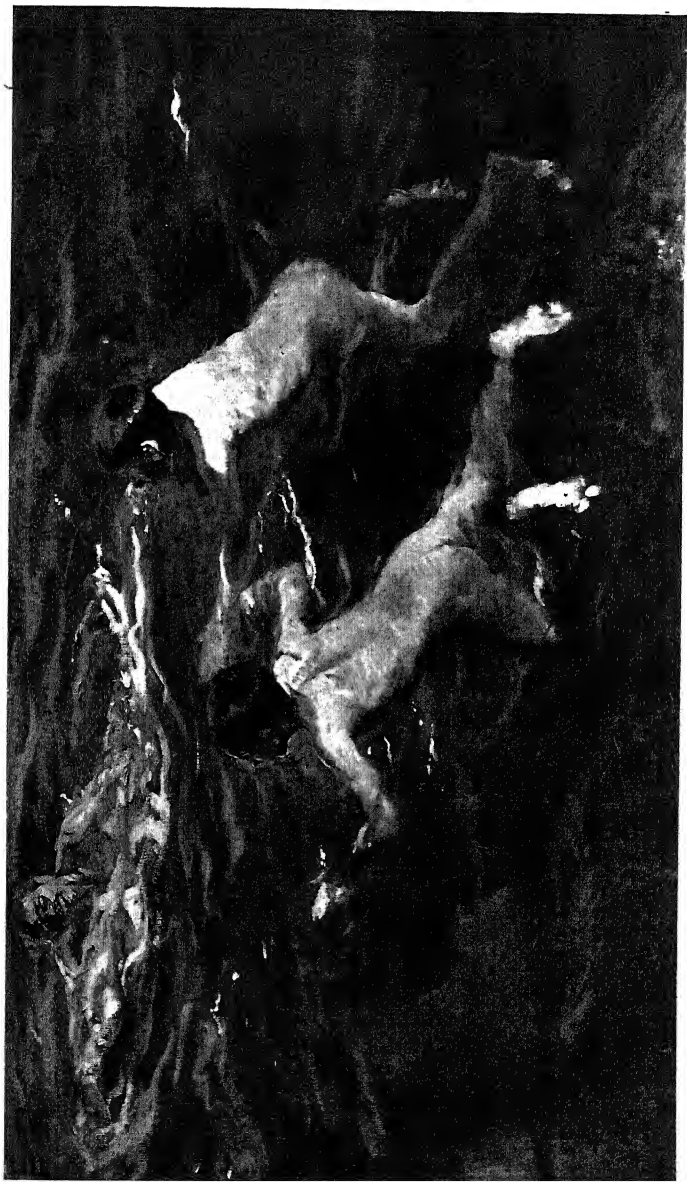
XII

TWO SPANISH PAINTERS

MODERN art, particularly American art, owes much to Velasquez and something to Goya, and modern painters have been prompt to acknowledge their indebtedness. But there has been a prevailing impression that with Goya's rich and unique achievement Spanish art stopped in its own country so completely as to be incapable of revival. The impression was disturbed in this country by the appearance in the galleries of the Hispanic Museum in New York, and also in Buffalo and in Boston, of the work of two modern Spaniards, one a painter who demonstrated by his methods and choice of subjects that the old Spanish traditions and ideals had not been forgotten, the other a singularly isolated individual who illumined for us a side of Spanish life which art previously had ignored. Both spoke a racy idiom and conveyed a sense of quickened vitality by freedom of gesture, unhackneyed arrangement, intensity of color, reality of type, yet in their influence upon the public they were as far as might be asunder.

Joaquin Sorolla y Bastida was born at Valencia, Spain, in 1863, and began seriously to study art at the age of fifteen. He studied at the Academy of his birthplace for several years and won there a scholarship entitling him to a period of study in Italy. He visited Paris also, where he was profoundly impressed, it is said, by two exhibitions in the French capital, one of the work of Bastien LePage, the other of the work of the German Menzel. The modern note is clearly felt in all his later painting, but certainly not the influence of either Bastien LePage or Menzel. The painter to whom he bears the most marked resemblance is Botticelli. The spiritual languor, the melancholy sentiment, the mystical tendency, the curiosity and interest in the unseen which are important characteristics of the Florentine who read his Dante to such good purpose do not appear in the work of this frank and lusty Valencian, but where else in modern painting do we find the gracile forms, the supple muscles, the buoyancy of carriage, the light impetuosity of movement, and the draperies blown into the shapes of wings and sails, which meet us here as in the pagan compositions of Botticelli?

If we glance at Sorolla's young girls and young boys racing along the hot beach, or his bathers exulting in their "water joy," we recall at the same moment the "Primavera" with its swift-stepping nymphs, the wind



THE SWIMMERS
From a painting by Sorolla

In the Metropolitan Museum of Art.

gods in the "Birth of Venus," or the "Judith" with her maid moving rapidly along a flower-strewn path. This joy of motion and this continual suggestion of youth and vitality form the link that binds together the so dissimilar ideals of the old and the modern master. Sorolla's inspiration is by far the simpler. His art reflects the brilliant sunshine of the Mediterranean coast, the tonic quality of the fresh air, and the unconventionality of life by the sea. All his people use natural gestures and express in their activity the untrammelled energy of primitive life. In looking at these children, and there is hardly a figure that has not the naïveté of childhood, we think less of the individuals portrayed than of the outdoor freshness of which they are a part. They are much more spirits of nature than the dryads and nereids and mermaids conceived by the Germans to express in symbol the natural forces. Nothing suggests the use of models, all has the look of spontaneity as though the artist had made his notes in passing, without the slightest regard to producing a picture, with only the idea of reproducing life. Life, however, appears in his canvases in a sufficiently decorative form, although not in the carefully considered patterns of those artists with whom the decorative instinct is supreme.

Observe, for example, the painting entitled "Sea Idyl." Two children are stretched on the beach, their

bright bodies wet and glistening and casting blue shadows on the sands. They are lying so close to the water's edge that the waves lap over them, the boy's skin shines like polished marble under the wet film just passing across it, and the girl's drenched garments cling with sharp chiseled folds to the form beneath like the draperies of some young Greek goddess just risen from the sea. The insolence of laughing eyes, the idle fumbling of young hands in the wet sand, the tingling life in the clean-cut limbs, the buoyancy of the waves that lift them slightly and hold them above the earth, — all are seen with unwearied eyes, and reproduced with energy.

The management of the pigment in this picture as in many of the others can be called neither learned nor subtle. Apparently the artist had in mind two intentions, the one to represent motion, the other to represent light, and he set about his task in the simplest way possible, with such simplicity, indeed, that the extraordinary character of the result would easily be missed by a pedant. It has not been missed by the public, who have entered with enthusiasm into the painter's mood, perceived the originality of his vision and the joyousness of his art, and have radiated their own appreciation of this vitalized, healthful world of happy people until they have increased the distrust of the pedant for an art so helplessly popular.



In the Metropolitan Museum of Art.

THE BATH — JÁVEA
From a painting by Sorolla

TWO SPANISH PAINTERS

The distrust is not unnatural. To follow the popular taste would lead us into strange errors in our judgments of art, and only rarely would produce a predilection capable of lasting over a generation. How is it, then, that we fearlessly may range ourselves on the side of the public in admiration of Sorolla's art? Because the painter has cast off the slavery of the conventional vision. He sees for himself, the rarest of gifts, and thus can well afford to paint like others. He spends, apparently, but little thought upon his execution, letting it flow easily according to his instinct for the appropriate. It is not a safe example to follow for painters who do not see with unusual directness. Often in searching out refinements of execution the eye discovers refinements of fact in the scene to be portrayed and makes its selection with greater distinction than would be possible at first sight. But Sorolla's prompt selective vision flies to its goal like a bee to a honey-bearing flower. He takes what he wants and leaves the rest with the dew still on it. His forces are neither scattered nor spent. His freshness is overmastering, and with our eyes on his creations we have that curious sense of possessing youth and health and freedom which we get sometimes from the sight of boys at their games. We are cheated into forgetfulness of the world's great age and our own lassitudes and physical ineffectiveness. This illusion is agreeable to the most

ARTISTS PAST AND PRESENT

of us, hence our unreserved liking for Sorolla's art which produces it.

The art of Ignacio Zuloaga, on the contrary, produces the opposite impression of complete sophistication. In place of adolescent exultations and ebullient physical activities, we find in it the strange sorceries of a guileful civilization. There are smiling women with narrowed eyelids and powdered faces, old men practising dolorous rejuvenations, laughter that conceals more than it expresses, motions that are as calculated as those of the dance, serpentine forms, fervid passions, and underneath the sophistries a violent primeval temper. In spite of the flowerlike gaiety of the color in rich costumes, the glint of silver, the sweet cool blues, the pale violets, in the painter's versions of the typical toreador of Spain the types are bold, cruel, and sullen. In spite of the fragility and elegance of the women on balconies under soft laces the prevailing note is that of undisciplined ferocity of emotion. This too is Spain, but not the Spain of the beach and sea life.

The rather numerous examples of what Mr. Christian Brinton has called Zuloaga's "growing diabolic tendency" make it clear that his art holds no place for spontaneity and the innocence due to ignorance, but where he keeps to Spanish subjects his work remains healthy. There is the picture entitled "The Sorceresses of San Milan"

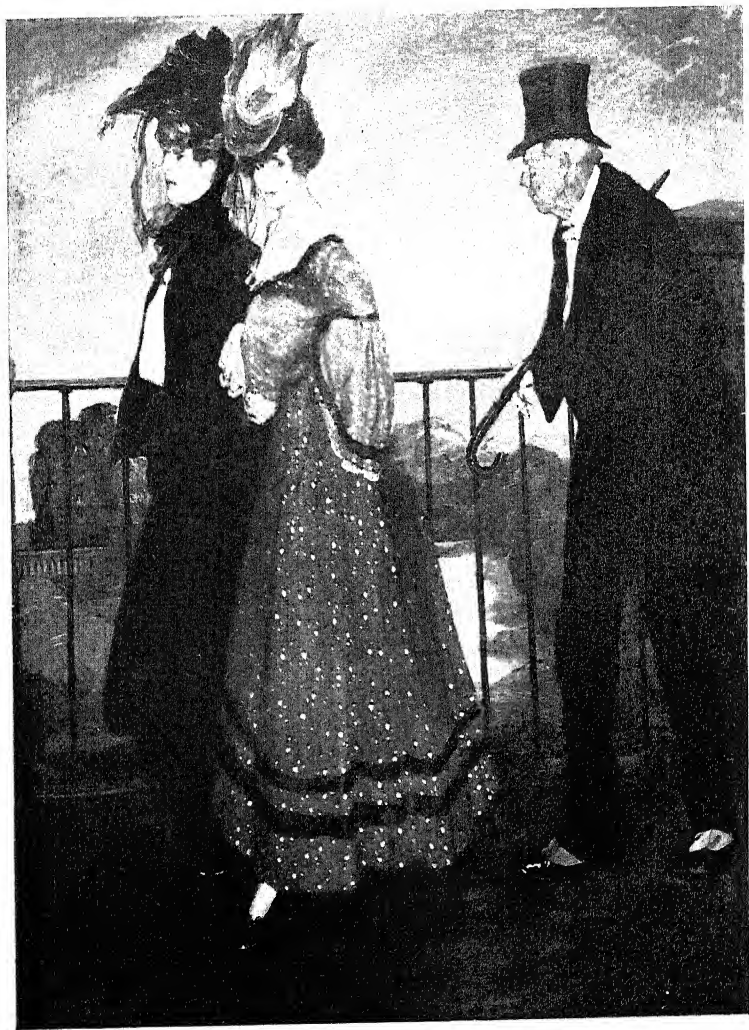
in which three old women are seen against a dramatic landscape. These haggard jests of nature bring before us a Spain from which the American finds it impossible not to shrink with horror, but they are rich in dramatic quality and recall the power of Goya to endow the abnormal with imaginative splendor while holding to essential truth. They are diabolic, if you will, but not Mephistophelian. There is the abstract horror in them which we associate with unknown powers of darkness, but not the guile with which we endow a personal devil. In striking contrast to this group are the balcony pictures in which women of ripe aggressive beauty lounge gracefully in the open-air rooms with the same freedom of pose as within doors, haughty yet frank, opulent, languid yet animated, flowers that could have bloomed nowhere else than under a scorching sun.

Then there is the group of dancers and actors and singers in each of which we find the adroit mingling of the artificial with the real, and the appreciation of the fact that with the people of the stage much that is artificial to others becomes their reality. The most vivid of them all is Mlle. Lucienne Bréval as "Carmen." The sinuous figure is wrapped in a shawl apparently of a thousand colors; actually, a strong combination of yellow, green, and red. The skirt which the singer gathers in one hand and lifts sufficiently to show the small foot in its red slip-

per has a dark vermilion ground on which is a pattern of large flowers of paler vermilion, boldly outlined with blue.

Over it droops the dark fringe of the shawl. A crimson flower is in the dark hair, and the footlights cast an artificial amber glow on the face. This tawny harmony is seen against a background of slightly acid green; at the other side of the canvas is a little table with two men seated at it. They look "made up," in the theatrical sense, and the table looks rather light and rickety; there is one solid natural stage property, the yellow jug on the table with its dull blue figure. The whole life and reality of the picture are in the Carmen smiling and muffled in the curious shawl, as if she were about to move in a fiery dance in which her brilliant wrappings would take a part as animated and vital as her own. No one but a Spaniard could invest a garment with such expressiveness.

"Paulette as Danseuse" is another stage figure. Here again the costume speaks with extraordinary eloquence. The colors are green and pink, and play delicately within a narrow range of varied tones. Under the short green jacket the low-cut bodice shows a finely modeled throat and a chest that seems almost to rise and fall with the breath, so palpitating with life is the fleshlike surface. The poise of the figure suggests that the dance has that moment ended, and the eyes and mouth are slightly



Courtesy of the Hispanic Society of America.

THE OLD BOULEVARDIER
From a painting by Zuloaga

arched. The undulating line of the draperies, now tightly drawn about the figure, and again billowing into ampler curves, suggests the rhythm of the dance.

In another canvas we see Paulette once more, this time in walking costume, standing with her hands on her hips in a daintily awkward pose. Her lips, in the first picture upturned at the corners, mouselike, have widened in a frank smile, her eyes have lost their formal archness and look with detached interest upon the passing show, she still is supple, clear cut, with a flexible silhouette, but her gown would find it impossible to dance, and, as before, she and her gown are one.

In "The Actress Pilar Soler," on the other hand, Zuloaga dispenses as far as possible with definite aids to expression. The costume is undefined; the half-length figure, draped in black and placed high on the canvas, is seen against a dark greenish-blue background. The mass of the silhouette, unbroken as in an Egyptian statue, but with tremulous contours suggesting the fluttering of life in the dimly defined body, is sufficiently considered and distinguished; but it is the modeling of the face that holds the attention, a mere blur of tone, yet with all the planes understood and with a certain material richness of impasto that contributes to the look of solid flesh, the dark of the eyebrows making the only pronounced accent — a face that becomes more and more vital as you look at

it, with that indestructible vitality of which, among the Frenchmen, Carrière was master.

In several other canvases, notably in the first version of "My Cousin Esperanza," and the second version of "Women in a Balcony," Zuloaga has caught this effect of vague fleeting values, changes in surface so subtle as to be felt rather than seen, a kind of floating modeling that suggests form rather than insists upon it. And he has done this in the most difficult manner. Whistler long ago taught us to appreciate the effect, but he worked with thin layers of pigment, a sensitive surface upon which the slightest accent made an impresssion. Zuloaga, on the contrary, works with a full brush, and consequently a more unmanageable surface. He attains his success as a sculptor does against the odds of his material, but he seems better to suggest his special types in this way.

Often he makes his modeling with the sweep of his brush in one direction and another. "Candida Laughing" shows this method, and so does the "Village Judge," in which the pigment is still more freely swept about the bone of the cheek and the setting of the eye, telling its story of the way the human face is built up in the frankest and briefest manner. With the lovely "Mercedes," a fragile figure, elegant in type, the workmanship becomes again less outspoken. The haughty, graceful carriage, and the intense refinement of the features that glow with

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138 253

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about has always been simultaneous progress in the expression of both aspects—more intricate bodies with their counterpart in subtler behaviour, a growing mentality and its counterpart in a more complex brain-life.

Objections to the Two-Aspect Theory. (1) It has been objected that the phrase "two aspects of the same process" is unmeaning when forced upon the psycho-physical relation, where we have to deal with sequences of radically different orders, "apprehended in two radically different ways, the one by sense-perception, the other by reflective introspection". Fechner spoke of the view of a sphere from the inside and from the outside being two aspects of the same thing, but in that case the one gives us the other, whereas we cannot in the least degree deduce the nature of the psychical from an observation of the physical, or contrariwise. But this objection states a false case, for the postulate of the identity hypotheses is that there never are two events, but always only one. We must not think of two disparate series, one teleological, implying a purposive selective unity, and the other mechanical, due to the refined and complicated organisation of the nervous system; we must think of one series fundamentally purposive and in its higher reaches consciously purposeful. As Bain put it, "The line of causal sequence is not mind causing body, and body causing mind, but mind-body giving birth to mind-body." From a very different starting-point Samuel Butler said almost the same thing: "The idea of a soul, or of that unknown something for which the word 'soul' is our hieroglyphic, and the idea of living organism unite so spontaneously, and stick together so inseparably, that no matter how often we sunder them they will elude our vigilance and come together, like true lovers, in spite of us."

(2) It is also objected to the identity hypothesis that there is lacking, except in the case of the introspecting psychologist, any observer occupying the inner-standpoint. But it is not in the least necessary to the theory that there should be any continuous observation of the subjective aspect. In ordinary daily life there is introspection only at intervals, when this miraculous power of self-awareness has a definite rôle to play. In animal life there is, of course, no demonstrable self-consciousness, but there is a mental life which cannot be interpreted in terms of the abstractions of the physiology of the nervous system. According to the identity hypothesis this mental life is one aspect, hypothetically imagined by us, of the very highest reach of the organism's activity.

(3) It is objected that the two-aspect theory simply invents and glorifies an *X*, an unknown and unknowable entity. To make clearer what we do in some measure know, it postulates an indefinable reality of which we can know nothing. "The one substance," says Professor Stumpf, "which is supposed to manifest itself in the two attributes, the physical and the psychical, is nothing but a word which expresses the desire to escape from dualism, but which does not really bridge the gulf for our understanding." But the charge "nothing but a word" is readily made and as readily recoils. The identity hypothesis does not pretend that we know anything like all about that fraction of reality which we call a living creature, nor that we can explain its having two aspects. It maintains, however, that we know this about organisms, that they are agents that do things, unique individualities that express themselves in endeavour, psycho-physical beings that burn away and yet remember, that ripen and rot and yet work towards ends which transcend

themselves. What the 'identity hypothesis' or correlation theory postulates is not an unknown *X*, but an imperfectly known organism, whose pre-awareness of meaning is as real as its flesh-and-blood metabolism, yet inseparable from it.

(4) Another objection to the 'double-aspect' interpretation is that we know ourselves as self-determining—for no one can get away from an immediate awareness of his personal agency—whereas the organism is determined from without, being part of the mechanical system of things. Can the same reality be determined from without and self-determining? But the objection must be disallowed, first because the organism has spontaneity, from the *Amœba* upwards, and is certainly not wholly determined from without; and, second, because when we examine ourselves carefully we find that our mental life is not wholly self-determined. It is an unnecessary difficulty to say that one aspect is teleological and the other mechanical; for we have given good reasons for believing that the organism is more than mechanical. 'Body' and 'mind' are both of the teleological or purposive type, for that is the nature of the creature from first to last.

§ 5. *Monistic Speculation along the Line of the Double-Aspect or Correlation Theory.*

On the Double-Aspect or Identity Hypothesis all animals are psycho-physical beings, and this is borne out by what is known of the behaviour of the very simplest, for we see *Amœbæ* going a-hunting and *Foraminifera* working like selective artificers. But what of the plant world? Logically, we can make no halt, and there are curious phenomena which approach behaviour in carnivorous plants and climbing plants. In some cases, there is what looks like memory.

But the continuity argument presses us further. Since it seems very likely that organisms arose upon this earth from not-living materials, in a manner at present obscure, are we to suppose that consciousness somehow entered *ab extra* into the early organisms when they were as yet only beginning; or that it was interpolated later when they attained to some degree of complexity; or that the analogue of consciousness, which some have called infra-consciousness, was present even in the domain of the inorganic? The desire for continuity impels us to the speculation that even the inorganic raw materials were psycho-physical. For in no case can we think of consciousness arising out of motion, any more than we can think of atoms uniting for love.

There has been great progress in the course of evolution, but on the identity hypothesis we think rather of potencies being raised to higher powers than of the interpolation of new faculties. Instead of insinuating a principle of life *ab extra* when a suitable mixture of proteins had been somehow synthesised, we suppose that a synthetic advance of materials, which were ever more than motions, made behaviour possible. Instead of insinuating mind *ab extra* when the organism became complex enough, we suppose that the progressive differentiation and integration of what was from the outset a psycho-physical being, by and by disclosed another aspect of its inherent reality, and experimenting with ideas became possible. And similarly with man's rational discourse and with the amazing phenomena of human society.

Biological monism has been characterised as a relapse to the old and crude metaphysics of hylozoism. Perhaps it is nearer the hylopsychism of some of the New Realists. "By hylopsychism I mean the theory that—*The potentiality*

of the physical is the actuality of the psychical and the potentiality of the psychical is the actuality of the physical. Or, to put it in the form of a definition of consciousness: *Consciousness is the potential or implicative presence of a thing at a space or time in which that thing is not actually present . . .*" (W. P. Montague, p. 281). "By hylopsychism I wish to denote the theory that all matter is instinct with something of the cognitive function; that every objective event has that self-transcending implication of other events which when it occurs on the scale that it does in our brain processes we call consciousness" (p. 283).

Is there any difference between this and the monistic speculation of Prof. Lloyd Morgan? "Of simple awareness there can be no evidence by acquaintance, save in being aware. And since we cannot be an *Amœba* or an isolated neurone, an oak or an acorn, an attracting magnet or a shred of iron attracted thereto, we can never directly know whether in them some dim awareness is present or absent. None the less we may be permitted to suppose that awareness, as a specific mode of relation between terms, is ubiquitous throughout nature—basing this supposal on the principle of continuity. If here in us in high measure, then in the oak and the acorn, in the molecule and the atom, in their several measures and degrees" (1915, p. 10).

To demand of the biologist an explanation of the double aspect of the psycho-physical being is to demand the impossible. Organisms are unique facts; intelligent organisms are unique facts. But if the biologist is pressed hard and asked if there is no other unique fact beside which he can place his double-aspect organism, perhaps he may answer, "Why, there is only thought itself, which is subjective and objective at once."

The 'Body and Mind' problem has served to stretch man's brains for more than two thousand years, and there are many who would abandon it with the word 'Ignorabimus'. But Man will never leave it alone, and the resolute endeavour after greater clearness is likely to bring its own reward even if the riddle remain unread. For the inquiry patiently prosecuted is likely to lead to a deeper appreciation of what we call 'Body' and of what we call 'Mind'. And this deeper appreciation is the practically important result.

SUMMARY.

The approach to the difficult problem of the relation between 'body' and 'mind' has been cleared (a) by the argument that mechanical formulation is inadequate for the description of vital activities, and (b) by the recognition of the pervasive rôle of 'mentality' in Animate Nature.

In any consideration of the problem there must be borne in mind, from the biological side, how gradually mind develops in the individual, how gradually mind has evolved in the races of animals, and how intimately inter-dependent the psychical and neural processes are. Whatever theory is adopted, these facts remain.

In any consideration of the problem there must be borne in mind, from the humanist side, the reality of the thought-life, the reality of the external spiritual not-self which man has in the course of ages built up, and the potency of spiritual values in history and in everyday life. Whatever theory is adopted, these facts remain.

The question is how we are to think of our thought-life and of our brain-life in relation to one another, for we can at any rate talk of them as distinct actualities. At least seven answers have been given to this question. Two of these are only acceptable on the mechanistic hypothesis, namely (I) the throughgoing materialistic answer and (II) the theory of epiphenomenalism. The theory at the very opposite extreme—subjective idealism—(III) seems to deny the possibility of science. The theory of psycho-physical parallelism (IV) lands in apparently inextricable difficulties—so well exposed by Prof. James Ward. There remain in the field three possible theories:—(V) the theory of psychical monism, which few

scientific investigators can entertain; (VI) the theory of animism or the soul-theory; and (VII) the identity hypothesis, or two-aspect theory, or correlation theory.

A case can be reasonably stated for the theory of psychical monism, for the soul-theory, and for the two-aspect theory, and a decision must be left with the individual according to his personal experience. Each theory has its own advantages and its own difficulties. When the biological facts are dominant in the mind the balance will swing towards the 'two-aspect theory' or 'identity hypothesis,' which regards the living creature as a psycho-physical unity, psychosis and neurosis being two aspects of one and the same continuous life.

Perhaps, as in the case of vitalism, the most consistent scientific position is to keep firmly to the fact that just as the everyday functions of the organism, not to speak of its development, heredity, and evolution, cannot be adequately described in terms of chemico-physical concepts, so it appears that many of the forms of behaviour cannot be adequately described in terms of the concepts of biology. A new aspect of reality is expressed requiring new categories—psychological categories. This is but a pedantic way of expressing what was said of old: "Surely the life is more than food."

LECTURE VIII.

THE FACT OF BEAUTY.

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§ 1. *A Synoptic View of Animate Nature Must Include the Fact of the Pervasiveness of Beauty.* § 2. *General Characteristics of the Æsthetic Emotion.* § 3. *Beauty a General Quality of Animate Nature.* § 4. *Theoretical Objections to the Thesis.* § 5. *Concrete Objections.* § 6. *Factors in Æsthetic Delight.* § 7. *Aspects of Beauty in Animate Nature.* § 8. *Biological Significance of Beauty to the Beautiful Organisms themselves.* § 9. *Beauty of Animal Artifice.* § 10. *Evolution of Æsthetic Emotion.* § 11. *The Significance of the Pervasive Beauty of Animate Nature.*

§ 1. *A Synoptic View of Animate Nature Must Include the Fact of the Pervasiveness of Beauty.*

IN an inquiry into the significance of Animate Nature, there is no getting past *the fact of Beauty*. Whatever we make of it, the Beauty of Nature is a joy for ever to many, not only to the cultured, but to the unsophisticated who never heard of the æsthetic attitude. Man's contemplative and disinterested delight in the beautiful is well-nigh the best of him; and it is a reasonable and verified belief that we get at something in this way which can be reached by no other, certainly not by scientific analysis or by logic. There are curiously few general affirmations that we can make about Nature; one is that Nature is in great part intelligible or rationalisable, and another is that Nature is in greater part beautiful.

It is our object in these lectures to indicate what contri-

butions Biological Science has to offer to a general view of the world, and it is impossible for biologists to pass over the pervasiveness of beauty in the realm of organisms. We cannot say that science is required to discover this beauty in its obvious expressions in bird and flower, but its luxuriance in the unobtrusive, in the well-concealed, in internal and microscopic structure, and among the unicellulars cannot be discerned without scientific investigation. If the popular impression be that beauty is the exception, the scientific impression is that beauty is the rule. For a long time, perhaps till the middle of the 19th century, Beauty was very generally spoken of as a quality of the exotic—the orchid and the Bird of Paradise—now we feel it most at our doors. St. Peter's lesson has been learned, for we find nought common on the earth. As one of the poets says, "Beauty crowds us all our life." Moreover, sound science tells us much that is very interesting regarding the beautiful and intensifies our appreciation of its significance.

§ 2. *General Characteristics of the Æsthetic Emotion.*

We mean by the beautiful that which excites in us the particular kind of emotion which we call æsthetic. This is experienced in many degrees of intensity and of purity, but it is distinctive. The æsthetic emotion is not excited by touch, taste, or smell. The æsthetic emotion is an end in itself, like intellectual contemplation, though it may liberate Man's formative impulse. It grips us as organisms, 'body and soul' at once, and abides with us incarnate. The thing of beauty is a joy for ever. Prof. B. Bosanquet points out (1915) that æsthetic feeling has qualities of permanence, relevance, and community. That is to say, it brings no satiety; it is annexed to particular qualities—not a feeling of general

well-being; and it grows as we share it with others. In all but its simplest expressions, it strikes the chords of imagination, for, as Professor Bosanquet insists, "the æsthetic attitude is an attitude in which we imaginatively contemplate an object, being able in that way to live in it as an embodiment of our feeling. . . . The æsthetic attitude so far as enjoyable" is "the pleasant awareness of a feeling embodied in an appearance presented to imagination or imaginative perception."

§ 3. *Beauty a General Quality of Animate Nature.*

Now, what seems to us to be a fact, and a very interesting fact, is that all natural, free-living, fully-formed, healthy living creatures, which we can contemplate without prejudice, are in their appropriate surroundings artistic harmonies, having that quality which we call beauty. That is to say they have qualities—objective qualities—which excite in us a particular kind of emotion, often of a very high order. To many of us—of the eye-minded type—the blotting out of the annual pageant, say of flowers and of birds, would be the extinguishing of one of the lights of life. But we must pause to inquire whether our proposition really expresses a fact.

§ 4. *Theoretical Objections to the Thesis.*

The first objection is, that beauty is in no sense a quality of things, but is wholly in our minds—purely subjective. Hegel, forgetful of Schelling and Goethe, remarked that it had never occurred to any one to emphasise the aspect of beauty in natural things, that in fact the beauty was not in the things but in the contemplating mind. Some other philosophers, such as Vaihinger,—the author of *The Philos-*

ophy of the As If,—have maintained that the Beautiful is one of Man's self-preservative 'fictions'—whistlings to keep his courage up. But this is an extreme of subjectivism. No doubt the æsthetic emotion implies a racially and individually attuned mind, but this is not thrilled except in the presence of compositions of lines and combinations of colours which have a particular quality. There are other compositions and combinations—usually of our own making—which fail to please us, which have not the quality. Except in reminiscence, we do not have the æsthetic joy unless the thing of beauty is *there*, and in regard to animate objects there is remarkable congruence of emotion on the part of the observers, after certain readily intelligible difficulties have been overcome. Moreover, as a domesticated animal or cultivated plant degenerates under artificial conditions, becoming obese, or coarse, or scraggy, as the case may be, there is a correlated slackening in our pleasure in it. There is an objective basis of ugliness correlated with our subjective repulsion.

And again, it cannot be a mental fiction, this æsthetic delight, for if there is any corner of experience where the unity of body and mind is more forcibly illustrated than elsewhere, it is in connection with the æsthetic emotion. It is a body-and-mind reaction. "If we try," says Professor Bosanquet (1915), "to cut out the bodily side of our world, we shall find that we have reduced the mental side to a mere nothing."

Speaking of "the aspects of beauty and sublimity which we recognise in Nature, and the finer spirit of sense revealed by the insight of the poet and the artist", Professor Pringle-Pattison writes: "These things also are not subjective imaginings; they give us a deeper truth than ordinary vision,

just as the more developed eye or ear carries us farther into Nature's refinements and beauties" (1917, p. 127). "Philosophy does not require us, then, to treat the beauty and sublimity of natural objects as subjective emotions in the bystander: we are entitled, on the principles I have been advocating, to treat them as qualities of the object just as much as the vaunted primary qualities" . . . (p. 129). "Things are as they reveal themselves in their fullness to the knowing mind" (p. 130).

It is highly probable that our likes and dislikes, our standards and criteria, have been to some extent wrought out in the course of ages of familiarity with Nature. It is highly probable that certain arrangements of lines and colours please us greatly because of racial and even pre-human associations, for we are strange medleys of organic memories. But no one can say that he knows much about this. There are some cases of apparent æsthetic delight among animals, *e.g.*, that of the Bower-birds which decorate their honey-moon bower with brightly coloured objects, apparently productive of pleasant excitement. But we do not wish to make much of the rather problematical æsthetic predispositions inherited from pre-human ancestry, especially since whatever was thus entailed had to pass muster with Man himself, had to be assimilated or eliminated, approved or rejected by an evolving rational being. Allowing something for hereditary associations, we have to face the fact that man has a great pleasure in the lines and colours of, say, flowers and birds; and our point is that these are not 'any-how' lines and colours, but have a positive quality.

It is worth noting (1) that many quite unfamiliar living creatures—such as deep-sea animals—are recognised at first glance as triumphantly beautiful; (2) that it is among the

domesticated and the cultivated, in favour of which man should be prejudiced, that we find the best examples of the ugly; and (3) that for many people the most beautiful things—that is to say, the things which evoke the keenest æsthetic delight—are not natural objects, but queer creations which bear no resemblance to anything in the heavens above, or in the earth beneath, or even in the waters under the earth where strange beings abound. Yet the beautiful thing—a decoration, a piece of pottery, a tile—thrills us through and through, and we never tire of it.

Another objection is based on the capriciousness of taste. In his well-known Romanes Lecture on “Criticism and Beauty”, Mr. Arthur J. Balfour laid emphasis on the conspicuous absence of common agreement as to what is beautiful. There is no accepted body of æsthetic doctrine. Taste differs with race, age, and degree of culture. Greece had apparently in ancient days values very different from ours as to music, and in pictorial art what is one man’s food is another man’s poison. Even among the aristocracy of taste, what agreement is there among the various schools and critics? Mr. Balfour maintains that there is no standard of the beautiful to be found (a) by critical analysis, or (b) in the consensus of experts, or (c) in the general suffrage of pleased mankind. So he concludes that just as that is for every man most lovable which he most dearly loves, so that is for every man most beautiful which he most deeply admires.

Perhaps we may evade the force of this argument by remembering that Mr. Balfour was discussing art, while our theme is Nature, which makes a great difference. Moreover, while there is discrepancy of view among experts as regards the merits of subtle expressions of art, there is usu-

ally agreement in appreciating straightforward æsthetic excellence and in rejecting the ugly.

In maintaining *the objectivity of beauty* we recognise to the full the subjective side, namely the æsthetic emotion, which is complex, not simple. The emotion is the subjective side, and, as every one knows, very *personal*, varying with age, health, state of mind, past experiences, and so forth: but certain qualities of form, colour, and movement in the objects of contemplation are objective and do not in any way depend on us. Against this position it does not seem particularly cogent to urge that the uneducated may see no beauty in a grass; that the sick man may find his old favourites intrusive and repugnant; that an analysis of our delight in the beautiful reveals subtle associations and self-projections. For it must be remembered that all sensory alertness demands discipline; that there is, so to speak, easy beauty and difficult beauty—the latter often mistaken by the careless for ugliness; that health in subject and in animate object is the normal state with which we have primarily to reckon; and that a pleasedness directly induced by certain qualities of things may be enhanced and overwhelmed by secondary factors due much more to the world within than to the world without.

§ 5. *Concrete Objections.*

But there is another series of objections, perhaps to the scientific mind more interesting. These consist in bringing forward evidence that the realm of organisms is spotted with ugliness. To meet these objections let us briefly explain the saving-clauses attached to our thesis.

(1) There are some creatures which the average man cannot contemplate without prejudice. He does not admire

the jellyfish, beyond doubt a decorative masterpiece, because he was once stung; he cannot abide the handsome newt because of its clammy skin; he does not appreciate the snake's beauty because of the Garden of Eden. There is no use trying to get a fair verdict from a packed jury. In testing our thesis we must exclude cases where our impressions are more or less excusably warped by some unpleasant association—by something which is often at least quite extrinsic to the creature. It is difficult, even for a naturalist, to judge impartially of the artistic merits of parasites, though in some cases, like dodder and mistletoe, the beauty is too strong for our prejudice. In support of the view that Nature is spotted with ugliness, Prof. James Ward refers to creatures like the spinose lizard which has been called *Moloch horridus*. But his examples are unfortunate. They are animals in regard to which a prejudiced association might readily arise; but they are delightful quaint creatures over which the artist is enthusiastic.

The other saving-clauses are slightly different. To get a clear issue we must exclude domesticated animals such as prize pigs, and cultivated plants such as the buxom cabbage, which are non-viable in a state of nature, and bear too obviously the marks of man's fingers. We may exclude also unfinished or embryonic stages, which are often, as a matter of fact, hidden away very carefully in Nature. We may exclude also all captive creatures which are distorted or crippled by parasites or by disease, and all the monsters of the teratological show which Nature would not have tolerated for a moment. These *are* ugly, and we shall see, later on, that there are several objective reasons for their being repulsive to us. Our thesis refers to wholesome wild nature.

Another saving-clause is significant. If we are to appraise

rightly we must see the creature in its native haunts,—in the environment to which it is adapted, which is in a sense its external heritage, which it has in some cases sought out. The hippopotamus at the Zoo may fail to excite æsthetic emotion, but that this is our misfortune and not Behemoth's fault is evident from the book of Job. We have to see him as the author of that poem saw him, with his ruddy hide in the shade of the lotuses, in the covert of the reeds and fens. "His strength is in his loins, his force in the sinews of his belly, the muscles of his thighs are knit together, his bones are pipes of brass, his limbs are like bars of iron, he is the chief of the ways of God." And we, purblind, call the hippopotamus an ugly creature!

This is a subtle subject which we venture to discuss—the pervasiveness of a certain quality in living things and in the inorganic domain as well that makes life to the relatively unfettered a continuous delight. So we must be pardoned if we treat it gently, rather than with stern analysis. The science of æsthetics has not gone far yet, and we are not desirous of doing much more than pleading that our synoptic view of Nature must include a frank recognition of the fact of beauty.

§ 6. *Factors in Æsthetic Delight.*

What is implied in our æsthetic emotion when we watch beautiful animals—the Shetland ponies racing in the field, the kingfisher darting up the stream like an arrow made of a piece of rainbow, the mayflies rising in a living cloud from a quiet stretch of the river, or the sea-anemones nestling like flowers in the niches of the shore-pool? What is implied in our thrill at finding in a corner of the rocks near the waterfall a stately Royal Fern—

“Plant lovelier in its own recess
Than Grecian naiad seen at earliest dawn
Tending her font, or Lady of the lake
Sole sitting by the shores of old romance.”

In the first place, our enjoyment has a *sensory or physiological factor*. What we see sets up agreeable rhythmic processes in our eyes, and agreeable rhythmic messages—waves of chemical reaction if you will—pass to our brain, and the good news—the pleasedness—is echoed throughout the body,—in the pulse, for instance, and the beating of the heart. Wordsworth was a better physiologist than he knew when he said, “my heart leaps up when I behold a rainbow in the sky”, or again, “And then my heart with pleasure fills, and dances with the daffodils”. As with music, so with beautiful sights external rhythms are often echoed in internal rhythms, and rhythms are pleasant. It is easy enough to burlesque the idea of the physiological factor in æsthetic delight, but the sensory thrill is always there, and in simple cases, where perception is not wide awake, it may be predominant. We cannot enter into the difficult question of the precise relation of the bodily resonance to the æsthetic emotion, in connection with which three views have been held. They are thus stated by Sherrington:—(a) that emotion is first aroused and that its nervous correlate excites bodily resonance; (b) that the stimulus excites the mind and the nervous centres for visceral resonance concurrently; and (c) that the stimulus acts on centres ruling the viscera, and that the visceral sensations, laden with affective quality, induce the emotion. We adhere to Sherrington’s conclusion, that the visceral resonance is *secondary* to the cerebral excitement and the associated emotion, that it reinforces rather than initiates the joy.

The second factor in our æsthetic delight is *perceptual*. The 'form' (in the widest sense) of what we contemplate is significant for us and satisfies our feeling. Beauty increases with significance of form, with the degree in which meaning is suffused into material, or with the degree in which the way is opened to us to give imaginative interpretation. The æsthetic attitude, Professor Bosanquet says, "is an attitude in which we imaginatively contemplate an object, being able in that way to live in it as an embodiment of our feeling". We actively respond to what we enjoy looking at, projecting ourselves into it, reading ourselves or something else into it, in an æsthetic illusion, which has something in common with make-believe forms of play, just as these in turn are linked on to art. It is because of the importance of this factor that many have been led to the idea, which seems to us mistaken, that the quality of beauty is altogether subjective.

If the beautiful form which moves us is truly excellent, it becomes more significant in all its details, in proportion to the intensity of our æsthetic contemplation. The form lends itself to more and more meaning. The imagination receives a succession of liberating stimuli, one after the other, according to the depth of the beauty of the object; and the fact which seems to us to be outstanding is that the lines and patterns and colours of living creatures go to make up a 'form' which almost never disappoints.

In its highest reaches the imaginative perception rises into the poet's vision, of which Blake speaks:—

"And before my way
A frowning thistle implores my stay.
What to others a trifle appears
Fills me full of smiles or tears;

For double the vision my eyes do see,
And a double vision is always with me,
With my inward eye, 'tis an old man grey,
With my outward a thistle across my way."

While venturing to lay some emphasis on the objectivity of beauty and on the physiological as well as psychological side of the æsthetic emotion, we recognise that the higher factors may come to mean much more than the primary ones. As Professor Bosanquet says, "Man is not civilised, æsthetically, till he has learned to value the semblance above the reality. It is indeed, as we shall see, in one sense the higher reality."

A third factor in our æsthetic delight is *conceptual*. Experts maintain that nothing which does not appear can count in the æsthetic impression, but it seems to us impossible to shut off the effect of associations and the influence of concepts on percepts. There is, for instance, the influence of the concept of adaptiveness which is always in the background of the naturalist's mind, as is, indeed, true of most of us. That thoughtful physiologist, Sir John Burdon Sanderson, was firmly persuaded that an appreciation of adaptiveness bulks very largely in our æsthetic enjoyment of animal form and structure. Canon Hannay speaks of the delight of watching the flight of birds:—"Above the rocks hovered the gulls with outstretched wings. Sometimes they slid down the wind till they almost touched the sea. Then with slow strong beatings of their wings they rose high again, slanted seaward against the breeze, swept in wide circles, lazily indifferent as it seemed to destination, but bent on satisfying themselves with exquisite smooth motion." As we watch this everyday sight we have purely æsthetic admiration of the grace of the creatures and of the music

of their movements. There is sensory pleasure and there is imaginative sympathy. But the delight is subtly heightened by an appreciation of the fitness of the birds to this mastery of the air,—an appreciation that steals into the mind rather as an aroma than as a cold-blooded scientific reflection.

By the objectivity of the beauty of Animate Nature we mean that there is in the 'form' of plants and animals a positive quality which excites the æsthetic emotion. Speaking of tragic poetry, Mr. Bertrand Russell says: "it becomes possible at last so to transform and refashion the unconscious universe, so to transmute it in the crucible of imagination, that a new image of shining gold replaces the old idol of clay. In all the multiform facts of the world—in the visual shapes of trees and mountains and clouds, in the events of the life of man, even in the omnipotence of Death—the insight of creative idealism can find the reflection of a beauty which its own thoughts first made." This is splendidly said, and that man's mind should be able to assert "its subtle mastery over the thoughtless forces of Nature" is something to ponder over, but our concern is with simpler things than the triumph of imaginative idealisation. We are pleading for the reality of a beauty which man's thoughts did *not* first make.

§ 7. *Aspects of Beauty in Animate Nature.*

Another question arises: Of what elements does the beauty of plants and animals consist? The general answer must be: In combinations and arrangements of lines and colours, and, in the case of animals, in movements as well.

It has been known for centuries that certain forms are much more pleasing than others. This has been borne out by experiments with children and other unsophisticated per-

sons. Thus an ellipse with its axes in the proportion 5:3 has been recorded as very pleasing since 300 B.C.; it is the golden or divine section; it leads on to the mystic pentagram. But why it is more pleasing than other ellipses, or than a rectangle, who can tell us? The eye registers certain forms with pleasure; there are lines that flow and shapes that sing. The approximate logarithmic spirals, so common throughout organic nature, for instance in horns and cones, in shells and buds, are peculiarly pleasing.

Perhaps this depends in part on racial education. For racially we were brought up in the country, and grew up more appreciative of rounded surfaces than of sharp corners. When we get beyond the domain of the inorganic, Nature is on the whole a world of curves. We were brought up on curves. Perhaps certain dominant associations of very early origin linked curves and pleasure together. Even our photographic plate—our retina—is a beautiful curved surface, and this may have something to do with our dislike of the angular.

Among organisms we like best those with flowing lines, which repeat one another rhythmically; which conspire, as Lessing said, to one effect; which are readily summed up; which compose. We are apt to be less pleased with asymmetrical animals (like snails), top-heavy animals (like hornbills), disproportionately lanky animals (like ostriches), not that any of these are to be artistically apologised for. We are least inclined to admire creatures whose architectural plan is difficult to grasp, which are distracting conundrums, or those which are too prolonged and monotonous in their repetition (like millipedes), or those which startle our perceptual conventionalities (like the Indian Ocean fish which has a window right through it). But our point is simply

that with a few exceptions (which are too difficult for us) the lines of living creatures are such that they give us æsthetic pleasure. This is as true of the microscopic shells of Foraminifera and Radiolarians—which are joys for ever—as of the lines of the crane and of the cedar of Lebanon. It is as true of the carefully hidden down-feathers of the eagle as of the tail of the peacock. It is as true of the internal architecture of a sea-urchin's spine as of the external moulding of a tiger. It is as true of the minute chiselling of many a moth's egg-shell as of the sweeping lines of an Iguanodon. Is there no significance in the omnipresence of these pleasing lines?

The second element in organic beauty is colour, which so often emphasises and enhances the value of form. It seems that all wild animals and plants, living an independent and healthy life and in their natural surroundings, are beautiful in colour, that is to say, æsthetically pleasing. The combinations in parrots, humming-birds, birds of Paradise, coral-reef fishes, butterflies, orchids, and the like are often daring, but they are never wrong. That is to say, when we look at natural schemes of colour we are always pleased, which means, to begin with, that the chemical processes set up in our retina are harmonious. It may be remarked that some skin-diseases involve vivid colours, and that they displease us,—partly perhaps because associations make us feel them uglier than they are, but partly because they *are* ugly, being expressions of disharmonious vital processes, non-viable failures which Nature scarce troubles to look at, but casts at once as rubbish to the void. The coloration of a scallop shell, of a peacock's feather, of a poppy's petal, and so forth, depends on the orderly chemical processes of a healthy life, and it is perhaps for this reason primarily

that they never fail to set up pleasant changes in the human eye.

The third component of the beautiful in animals is movement. Just as we enjoy watching a waterfall, a fountain, the waves, or even the dance of motes in the sunlit air, so we are delighted with the jellyfishes throbbing in the tide, the flotilla of sepias all keeping time as they swim, the flying-fishes rising before the prow of the steamer like locusts before us as we walk in the meadow, the porpoises gambolling in the waves, the jerboas with their startling jumps, the flight of bat and bird and butterfly, and the way of the serpent on the rock. Let us watch the last. As Sir Richard Owen said, the snake can "outclimb the monkey, outswim the fish, outleap the zebra, outwrestle the athlete, and crush the tiger". The accurate zoologist cannot accept every word of Ruskin's famous description of the way of the serpent, but he will admit that it gets at the fact of beauty. "That rivulet of smooth silver—how does it flow, think you? It literally rows on the earth with every scale for an oar; it bites the dust with the ridges of its body. Watch it when it moves slowly—a wave, but without wind! a current, but with no fall! all the body moving at the same instant, yet some of it to one side, some to another, or some forward and the rest of the coil backwards, but all with the same calm will and equal way—no contraction, no extension; one soundless, causeless, march of sequent rings, and spectral procession of spotted dust, with dissolution in its fangs and dislocation in its coils. Startle it—the winding stream will become a twisted arrow; the wave of poisoned life will lash through the grass like a cast lance."

Spoil an animal—say by fattening—and the beauty of its movements vanishes,—we have the waddling duck and

the wobbling pig. But the general fact unquestionably is that the movements of wild animals are eurhythmic. We like them primarily because they set up a pleasant internal mimicry of eurhythmic movements within ourselves. We admire the fitness of the structure to the movements; an accompanying song may increase the thrill; we add the imaginative touch; the lark is at heaven's gate and we with it.

§ 8. *Biological Significance of Beauty to the Beautiful Organisms themselves.*

The question now rises whether the combinations and arrangements of lines and colours in organisms—which mean so much to us—mean anything physiologically in their possessors. Is there any deep reason behind them? (a) In some cases the answer is easy, for the arrangements are obviously useful—in giving stability of architecture, in reducing friction, and in economising materials. Thus one of the most exquisite structures in the world is the flinty skeleton of Venus' Flower Basket (*Euplectella*); and the experts say that the architecture of this is very perfectly adapted to stand such strains as are put on it as it rises like a fairy palace from the floor of the deep sea. A spirally coiled tendril is a pleasing object, and we know that it is directly useful in its formation by drawing the climbing plant closer to its support and afterwards by forming a spring which yields to the wind but does not break. The green pigment of a leaf is well known to be the most useful non-living substance in the world, but though the greenness is somehow wrapped up with its chemical composition it might conceivably have worked just as well had it not been green. On the other hand, colour is often of direct external utility in giving the animal a garment of invisibility, or in

giving the flower an advertisement which attracts useful insect visitors.

(b) Secondly there are arrangements of lines and colours which are not of direct use to their possessors, but have none the less a physiological significance, being expressions of rhythmic growth and orderly chemical processes. The pleasing parallel lines on many shells express periods of growths like the concentric rings inside the stem of a tree or the spine of a sea-urchin. The beautiful cross-bars on a hawk's feather are the expression of diurnal variations in the blood-pressure at the time when the feather was amaking. The subtlety of coloration is often due to its rhythmic distribution—its waxing and waning, its paling and flushing—so that it represents very literally the ripple-marks of growth.

(c) But, thirdly, in many cases, we cannot suggest for the beauty any utility whatsoever, either direct or indirect. Just as it is the way of water in certain circumstances to crystallise into very beautiful and very varied snow-crystals, so it is the way of individualised living matter to form the exquisitely beautiful shells of Foraminifera and Radiolarians. It may be that these relatively simple animals illustrate something that may be called organic crystallisation, though we shall afterwards find reason to suspect that this is not all; our present point is that their beauty is not useful. Just as it is the way of particles of water in the atmosphere to form a rainbow when the sun shines through, a beautiful thing that has no meaning at all except to us, so the "beauty for ashes" that transfigures the leaves of the forest in their dying has, so far as we know, no significance whatsoever to the plant. The withering leaves might as well be ugly, but they are not. Whence again rises the question, Is there any meaning in this pervasiveness of the beautiful?

The main part of the answer which we would suggest is simple. Keeping to those combinations and arrangements of lines and colours which are the expression of development, growth, and activity, what strikes us as characteristic is their harmony. The expert in these matters is of course the artist, the producer of the beautiful and of more than beauty, and his verdict almost without exception is that every one of these wild creatures is an artistic unity. The simple reason for this is that the lines and the colours, in their arrangements and combinations, are the expression of unified viable individualities which have stood the test of time. Perhaps this is in agreement with Signor Croce's definition of beauty as "successful expression". In the age-long struggle for existence the unharmonious, the 'impossible', have been always weeded out before they took firm root and multiplied. The monster is a contradiction in terms. Meredith put it all in a nutshell when he said "Ugly is only half way to a thing". Nature pronounces her verdict on ugliness by eliminating it. Beauty is Nature's stamp of approval on harmonious viable individuality, and just as, objectively, the ugly is only halfway to a thing, a too incomplete expression, so is it subjectively. As Professor Bosanquet puts it (1915), the imagination is "at once excited in a particular direction and thwarted in it".

But there is another side to it. In the course of hundreds of thousands of years our senses have become attuned to the natural. We have unconscious or conscious standards of line and colour, of sound and movement. Just as a discord may break a precious glass vessel by setting up contradictory vibrations, so there are colour-schemes that almost literally jar, and muddy colours that are as painful as noises. The big result remains, that the combinations of lines and colours

in natural individualities are such that they evoke in us an activity—a disinterested contemplative activity—which, as we have said, is almost the best of us. This is a noteworthy correspondence.

§ 9. *Beauty of Animal Artifice.*

When we pass from incorporated or incarnate beauty to that of artifice, we experience a delight in which there seems to be a deeper note than any that we have yet sounded. When we study the nests of birds, the webs of spiders, the architecture of the termitary, the combs of bees, the work of tube-building worms, the arenaceous encasements of some Foraminifera, we recognise skill in the use of materials, or selection of fit and congruent materials, or a triumphing over material difficulties, or an expression of individuality at a level almost reaching to art. Then in a new way deep calls to deep, we have a sympathetic joy in the creature's mastery of its materials, in its circumvention or solution of technical difficulties. We enjoy a vicarious victory of mind over matter. Let us consider once more the arenaceous Foraminifera, organless, tissueless creatures, with little visible complexity. When a *Technitella* makes for itself an encasement of minute Echinoderm plates, when another species makes a two-layered warp and woof of sponge spicules, when a *Reophax* makes a chain-armour of mica platelets cemented at their margin with chitin, when a *Marsipella* twists its borrowed sponge spicules in a spiral—probably anticipating the prehistoric genius who invented string, we venture to think that in such moments of endeavour and adventure in dealing with inorganic materials, artistic consciousness finds its first glimmering expression. We have argued that organisms are psycho-physical individ-

ualities, and perhaps we are nearer the truth in saying that *Technitella thompsoni* says to itself, in a quiet way of its own, "Anch' io sono pittore"—"I also am an artist", than in supposing that its beautiful architecture is describable in terms of surface-tension. Perhaps an intermediate view is truer still.

The artist knows of the emotion that rewards formative achievement, and we have ventured the suggestion that part of the ordinary man's enjoyment in a beautiful work of animal artifice (or, secondarily, in a beautiful organism itself) is a sympathetic sharing in the triumphant mastery of materials. The same general idea we have found in more developed expression in a lecture by Dr. P. Chalmers Mitchell entitled "Science and Life". From this we would quote a few sentences. Speaking not of Nature but of art, he says: "I do not doubt but that the creative artist is a supreme example of the exuberant will of conscious life to absorb, comprehend, transform the universe into itself, and that the emotion he conveys to us is an all-powerful stimulus. The form that he has created is significant, not because it is a vision of abstract relations, or of reality, or of truth, but because it has laid hold of more of the external world, recast it in categories of human mind and the human senses" (p. 18). "Æsthetic emotion is the responsive thrill to creation realised, and life, seeing the image of its own power, knows that it is beautiful" (p. 21).

§ 10. *Evolution of Æsthetic Emotion.*

In his Gifford Lectures (1915) Mr. Balfour has spoken of the absence of any pedigree for æsthetic emotions, and has suggested that all that evolutionists can do is to regard them as chance by-products. Æsthetic emotions have opened

to Man at his best something conveying not knowledge, but an intuition that was greater than knowledge. How can this be if the æsthetic emotions are but the refined outcome of primeval distributions of matter and energy? We have tried in our consideration of the organism to take the edge off such arguments. There are few active evolutionists of the present day who are committed to such materialism. From the physical abstractions 'matter' and 'energy' it is impossible to account for emotion, yet emotion may have evolved in psycho-physical beings such as it seems quite legitimate to postulate as the first organisms.

Æsthetic emotion is a very subtle feeling, and is possibly peculiar to mankind, yet it is not inconceivable that its raw materials—up to the level perhaps of a pleased awareness of specific arrangements of certain lines and colours as distinguished from others—may be detected far below the human plane of being. Bower-birds are not, of course, among man's ancestors, but it is interesting to know how the males decorate their sometimes elaborate courting bowers with brightly coloured pods and flowers and shells. We must remember that low down in the kingdom of the unicellulars, as we have seen, animals select material to work with and handle it without hands dexterously, and it does not seem far-fetched to suppose that the creature has a dim pleasure in its work. We find similar artificers at various levels in the animal hierarchy, and the thrill accompanying successful formative endeavour will probably strengthen and deepen with the degree of general differentiation and integration. From enjoyment of one's own achievement it is possible to pass to an appreciation of that of others, and in the fact that some birds will appropriate characteristic phrases of song from others we have a hint of admiration. It is too

soon to close the door on inquiry into the evolution of æsthetic emotion.

We have to remember also that from time to time value has been given to the beautiful by linking it to love. Shapes, patterns, colours, lights, fragrance, movements, perhaps originating for constitutional reasons, as decorative exuberances arise even in complete darkness, come to be seized upon by selection and brought into the service of preferential mating. To this difficult subject we shall return in Chapter XIV. We simply refer to it now because it suggests one of the ways in which interest in the beautiful might have been cultivated historically in pre-human days.

Another point worthy perhaps of consideration is that æsthetic emotion is its own evolutionary reward, since the feeling has a quite noteworthy unifying value in the development of personality, and in its communicability has been, especially in music, an important socialising factor. This idea has been elaborated in the work of Guyau—that enthusiastic evolutionist philosopher—who recognised the importance of the Beautiful and of Art in adding social sympathy to social synergy. A common admiration and delight helps to produce a community of feeling and sentiment.

To speak of the evolutionary value of being pleased with beautiful things does not involve the heresy of suggesting that we like beautiful things because of an ulterior reward. The delight is its own reward. But there is no real difficulty here, for an activity, like play, which is exercised for its own sake, may none the less have survival value. Beyond and deeper than this utilitarian interpretation, however, there is the idea—difficult, we confess, to state—that just as a beautiful organic ornament seems often of no use to its possessor, but is an expression of a harmonious life, so

man's joyous drawing towards the beautiful, when we trace it back far enough, may be an expression of the same, or of a harmony further back still.

§ 11. *The Significance of the Pervasive Beauty of Animate Nature.*

The recognition of the pervasiveness of beauty in the realm of organisms is important. First, because its enjoyment may mean much to man—part of the salt of life. And though its enjoyment may not be brought nearer by any cold-blooded assertions on the subject, man is susceptible to indirect education in reference to the beautiful as well as in relation to the true and the good. Various influences which may be typified by Gilbert White, Wordsworth, Ruskin, Whitman, and Meredith have done much to increase appreciation. Second, to those who agree with our position that the scientific view of the realm of organisms is not exhaustive, it will not seem far-fetched that we are inclined to dwell on the fact of beauty, regarding æsthetic emotion as another right-of-way path towards reality. It is thus that the beautiful has been thought of by many philosophers, such as Schiller and Schelling, “not as a casual and fanciful attribute of certain things or mental states, but as an independent revelation of the essence of reality of the truly real” (Merz, 1914, p. 25). Their suggestion is that the beautiful in Nature may be a key to her deeper significance. As Lotze put it, “It was of high value to look upon beauty, not as a stranger in the world, not as a casual aspect afforded by some phenomena under accidental conditions, but as the fortunate revelation of that principle which permeates all reality with its living activity” (quoted by Merz, 1914, p. 25). Third, in reference to the triad of human ideals—

the True, the Beautiful, and the Good—is there not significance in the correspondence that obtains between these and what we find in nature? To the ideal of the true there corresponds, perhaps, the rational orderliness and harmonious consistency of Nature, but rather, we should say, the reward of those organisms which face the facts effectively with the clear-headedness of vigorous health. To the ideal of the good there corresponds the extraordinary subordination of self to species which is so characteristic of organisms. To the ideal of the beautiful there corresponds the richness of the realm of organisms where ugliness is banned.

SUMMARY.

In an endeavour to indicate what contribution Natural Science has to make to our general view of the world, it is impossible to pass over the pervasiveness of beauty in the realm of organisms. Scientific investigation has disclosed it in the microscopically minute, in internal structure, in the well-concealed—everywhere.

We mean by the beautiful that which excites in us the distinctive kind of emotion called æsthetic, the characteristic qualities of which, such as duration without satiety, communicability, and detachment from utility, have been much discussed by experts. What concerns us in this study is the interesting fact that all natural, free-living, fully-formed, healthy living creatures, which we can contemplate without prejudice, are in their appropriate surroundings artistic harmonies—a joy to behold.

This thesis may be objected to on various grounds—that beauty is wholly in our minds, that our likes and dislikes are wholly due to individual and racial nurture, that there is no agreement as to what is beautiful; but it seems possible to meet these objections. Another series of objections, however, consists of evidence that the realm of organisms is spotted with ugliness; and to meet these it is necessary to emphasise the saving-clauses of our thesis, that it does not apply to the domesticated and cultivated, the diseased or crippled, the unfinished, the parasitic, and the freakish. Moreover, the artistic harmony is often obscure till the creature is seen in its native haunts—a fact of special importance when these are of its own choosing.

In our æsthetic emotion there is a physiological factor of sensory thrill. Pleasant eurhythmic processes are set up within us,—a bodily resonance. But it is a thoroughly mind-and-body or organismal feeling. There is a psychological factor or perceptual response. We project ourselves into the object whose 'form' (in the widest sense) is significant for us and embodies our feeling. We cannot, except abstractly, separate off 'mere sensation' or 'pure perception'—it is the whole organism's concern—and it seems very difficult to dissociate from our æsthetic delight the influence of certain concepts. Thus the physiologist, Sir John Burdon Sanderson, maintained that an appreciation of adaptiveness bulks largely in our æsthetic enjoyment of animal form and structure. Similarly, symbolism may contribute its inextricable influence; or we may discern the touch of the Divine Artist.

The elements that make up the impression we call visual beauty are arrangements and combinations of lines and colours, and a pre-condition of the beautiful is some quality of satisfactoriness in this pattern. In the case of animals, and somewhat apart, pleasing movements may be added to the presentation. But the big fact is that the stamp or halo of beauty is on every free individuality, and if the straight lines and the curves, the patterns, the colours, and the apportionment of the colours be expressions of normal vital processes, and so with rhythmic movements, it becomes easier to understand why they should appeal in a pleasant way to wholesome sensoria with the requisite freedom of response.

The question inevitably arises whether these combinations of lines and colours—which mean so much to us—mean anything to their possessors.

(a) There is no doubt that the 'beauty' has in some cases direct utility to the organism. For beauty of pattern often spells stable architecture, beauty of line is often the expression of strength and agility, and beauty of colouring often means a life-saving garment of invisibility. And there are other uses.

(b) In many cases the 'beauty' has vital significance though it cannot be called in itself useful. Thus a pleasing succession of concentric lines may represent the ripple-marks of orderly rhythmic growth.

(c) In many cases, however, the beautiful seems to be accessory, without utility either direct or indirect. The lines and colours are harmonious, probably because they are the expressions of unified viable individualities which have stood the test of time. The

monster is a contradiction in terms and is forthwith eliminated. "Ugly is only half way to a thing."

Passing from incarnate beauty to that of animal artificers—in encasement and web, in bower and nest—we recognise precise selection of material, effective use of it, and, it may be, a circumventing or mastery of technical difficulties. There is in varying degrees an external expression of the individuality, the creature creative.

The difficulty of scientifically accounting for man's 'sense of beauty' is doubtless great, as Mr. Balfour has emphasised; but this kind of inquiry is young. (1) The raw materials of æsthetic emotion may have been associated with successful formative endeavour. (2) It is well known that interest in the visually and audibly beautiful has been from time to time closely linked to 'love'. (3) Joyous feeling has a notable unifying influence on the development both of personality and of society. And there are other considerations.

Perhaps deepest of all in our æsthetic emotion is a sympathetic sharing in every triumph of 'life' over 'matter', in every abiding expression and extension of individuality. Thus Animate Nature is to many minds much more significant than Scenery and Precious Stones,—commanding as their beauty is. In any case, there is for man great value in the beauty of the world without. There may be theoretical exaggeration in Goethe's saying: "Sympathy and enjoyment in what we see is in fact the only reality"—and it is very satisfying in itself, as reality should be; but there is no risk of practical exaggeration, for the consistent discernment and enjoyment of the beautiful cannot be attained on any easier terms than consistent discernment and enjoyment of the True and the Good.

LECTURE IX.

THE ISSUES OF LIFE.

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§ 1. *The Tactics of Animate Nature.* § 2. *The Twofold Business of Life.* § 3. *The Struggle for Existence.* § 4. *Correction of Some Misconceptions of the Struggle for Existence.* § 5. *The Welfare of the Species.* § 6. *As regards Warfare.*

§ 1. *The Tactics of Animate Nature.*

IF we share Bacon's belief that the footprints of the Creator are imprinted on His creatures, we cannot but be interested in inquiring into the general trend of organic activities. What is all the bustle about? What are living creatures, as they are, immediately working towards? If they have an end in any sense in view, as some of them have, what is it and by what means do they accomplish it? Reality has been spoken of as "a totality of striving and willing existence", we have in the realm of organisms a portion of this reality, and we are bound to inquire into the fundamental motives of the striving and crying that surround us.

Some students of the tactics of Animate Nature have discerned in them little to admire and less to imitate. To Huxley, for instance, it seemed that Nature's tactics are so disappointing that Man's best rule for his own conduct is to try to do the direct opposite of what Nature does. Others, such as Prof. Patrick Geddes, have discerned in Animate Nature a materialised ethical process worthy of our closest attention and imitation. Which is right in this case, master or pupil? Others, again, while making no

pronouncement, have deprecated further inquiry, reminding one of people who are nervous as to the manners of their poor relations. The inquiry is interesting, for if we have made the great assumption that the system of lives which we call Animate Nature is an expression of something more spiritual and abiding than itself a difficulty will arise if the tactics are those of "a dismal cockpit".

Those who believe that Nature is (as Prof. William James phrased it) "the external staging of a many-storied universe, in which spiritual forces have the last word", will have to face a great difficulty if what is often reported about Nature be even approximately true,—that her only word to man is "Each for himself, and extinction take the hindmost". We turn again therefore to our task of justifying the ways of Nature to man by the method of accurate description.

In inquiring into the general tactics of Animate Nature, which we have seen to be pervaded with vitality, with mentality, and with beauty, we must avoid two extremes. The one focusses attention on 'love', the other on 'hunger'; the one emphasises race-preserving, the other self-preserving activities. On the one hand, there is a wealth of illustrations of parental care, of conjugal devotion, of mutual aid, of loyalty to kin, of subordination of the individual to the life of the herd or hive,—in short, of 'altruistic behaviour', if we can use the term in inverted commas to indicate that it is below the level of strictly ethical conduct.

The other extreme is appalled by the dæmonic element in Nature, the non-moral callousness, the wastefulness, the ruthlessness, the egoism, the mere 'weather'. It is well expressed in William James's famous essay *Is Life Worth Living?* "Visible nature," he says, "is all plasticity and

indifference,—a moral multiverse, as one might call it, and not a moral universe. To such a harlot we owe no allegiance; with her as a whole we can establish no moral communion” (1905, p. 43). “Beauty and hideousness, love and cruelty, life and death keep house together in indissoluble partnership; and there gradually steals over us, instead of the old warm notion of a man-loving Deity, that of an awful power that neither hates nor loves, but rolls all things together meaninglessly to a common doom” (1905, p. 41).

Now there is a *via media* between these two extreme views, and it is the path of accuracy. On the one hand, we must not pick and choose our facts, selecting those which suit our thesis and ignoring the discordant. On the other hand, we must not be gratuitously anthropomorphic, projecting upon Nature concepts drawn from human society which very imperfectly fit. We must also guard against allowing human sentiments, as to supposed cruelty and the like, to lead us astray in domains where they are irrelevant. We must be restrained and critical in the degree to which we read ethical content into animal behaviour,—especially when it is of the instinctive type.

§ 2. *The Twofold Business of Life.*

As we contemplate the drama of life among plants and animals, both as we can see it around us with our eyes, and as we can see it with the help of telephotic apparatus (such as the microscope and the palæontological museum!), we discern one perennial problem and endeavour, namely to adjust relations between the active, self-assertive, insistent, insurgent organism and the environment. The inorganic environment is callous, irresponsible, heavy-handed, yet remarkably amenable to life's purposes; the organic environ-

ment is capricious, unpredictable, combative. On the one hand, we see the Environment acting upon the organism, burning it and stoking it, heating it and cooling it, quickening it and slowing it, moistening it and drying it, provoking it and quieting it, nurturing it and killing it, cradling it and burying it. On the other hand, we see the Organism responding to the environment, operating on it, changing it; thrusting as well as parrying; defying it, mastering it, and using it; even selecting it. Now the business of life is the continual adjustment of this twofold relation. But when we look more closely into the effective, regulated, self-assertive, self-expressive, insurgent activity which we call 'life', we see that it takes two main directions—caring for self and caring for others. That is the twofold business of life which all pursue,—the half-awake plant, the dreamy coral, the instinctive ant, the intelligent beaver, and rational man. The imperious primal impulses are 'Hunger' and 'Love', the subject and counter-subject of the great fugue of life. "Why do the people strive and cry?" the poet asked, and gave the lasting answer: "They will have food and they will have children, and they will bring them up as best they can." So is it through the realm of organisms. Of course the words 'hunger' and 'love' must not be used woodenly; they correspond to self-preservation and race-continuance, to self-regarding and other-regarding, to feeding and flowering, to nutrition and reproduction, to self-increase and self-multiplication. We may not be inclined to speak as Erasmus Darwin did of the "*Loves of the Plants*", but it is sound science to emphasise the fact that, rich as plants are in adaptations which secure food, they are not less rich in adaptations which secure the nurture and dispersal and development of their offspring.

In their endeavours to secure self-preservation and race-continuance, organisms exhibit an effectiveness, a persistence, a resourcefulness, and a finesse that is worthy of all admiration. But the shadow on the picture is the supposed Ishmaelitish character of the struggle for existence,—the shadow of what Huxley called “the huge gladiatorial show”. Sometimes, too, there is an occurrence of what looks like sheer devilry.

§ 3. *The Struggle for Existence.*

One of the great facts of life, beyond all doubt, is that summed up by Darwin as “the struggle for existence”. Nothing is more familiar, and yet the concept lacks precise definition and is the subject of lamentable misunderstanding. The phrase, as Darwin said, was to be used “in a large and metaphorical sense, including dependence of one being on another, and including (which is more important) not only the life of the individual, but success in leaving progeny” (*Origin of Species*, p. 50). This does not coincide with the view of some naturalists that the struggle for existence means nothing more nor less than life-and-death competition between individuals of the same kith and kin. If that had been Darwin’s meaning, he would not have spoken of using the term “in a large and metaphorical sense”, nor would he have spoken of the difficulty he felt in constantly bearing the conclusion in mind. We have to be especially careful since the idea of the struggle for existence was confessedly taken over from human life. It was consciously suggested to Darwin by reading Malthus; it was subconsciously suggested by the keen industrial competition, more striking, because more novel and less regulated, in Darwin’s day than ours.

It is clearest to start with the familiar fact of observation that the life of organisms is seldom an easy affair. The living creature is by its very nature insurgent and it finds itself encompassed by limitations and difficulties. As Spinoza maintained, every individual thing, so far as in it lies, endeavours to persist in its own being. How much more a living agent, that eats into its environment, that grows and stores and multiplies its kind! The vigorous creature is ever hustling and jostling in its will to live. Now, as every one knows, this insurgence of life meets three main difficulties, and the struggle for existence in the strict sense is the reacting clash.

The first difficulty is in the tendency to over-population. One weed could cover the earth in three years, one codfish could soon fill up the vastness of the sea, and one fly could soon shut out the sun. This tendency to overwhelming abundance limits the foothold and food-supply of the prolific organisms and of others in the same area; there are individual reactions against the limitations, and these constitute the struggle for existence which soon counteracts one of its own causes. A second difficulty follows from the pattern of the web of life, that is to say, from the nutritive inter-relations that have in the course of time been established. Plants have banked for animals, which draw on them. The higher animals devour the lower, and Nature is run on a plan of successive reincarnations. This conjugation of the verb *to eat* involves difficulties, and leads to the struggle for existence. A third limitation is the irregular changefulness of the physical environment.

None of the reasons which we have just recalled can be said to *necessitate* the struggle for existence. (1) There might have been a flood-bed for the teeming river of life,

and we know in point of fact that incalculable myriads of minute creatures flourish in the open sea without overcrowding. Moreover, the length of an organism's life is adjustable, and can be regulated in relation to the rate of increase. (2) It is conceivable that all animals might have been vegetarian and débris-eaters. To a much greater degree than was previously supposed the animals of the sea-floor depend upon detritus, the crumbs of the littoral table. Or much more might have been made of symbiotic partnerships between animals and plants,—so extraordinarily successful in cases like Radiolarians, of which some authorities say that there are five thousand species. (3) There is no necessity that life should be continually vexed by environmental vicissitudes, for there are monotonous conditions in which it flourishes bravely. We know, for instance, of the rich fauna of the great oceanic abysses—that strange, dark, cold, calm, silent, plantless world where there is neither day nor night, neither summer nor winter, but eternal monotony. We see, then, that the struggle for existence is not an inevitable consequence of the conditions of life. In fact, it is often evaded. Reduction of the number of offspring is an evasion of the difficulty of finding foothold in crowded areas; change of diet, *e.g.*, to vegetarianism, evades the necessity for cannibalism; and migration often evades the thrusts and arrows of an unfriendly environment. The true inwardness of the struggle for existence is discerned when we fix our attention not only on the limitations and difficulties, but on the self-assertiveness and insurgence of the creature, which insists on having its own way.

A second point is that the struggle for existence is not synonymous with great mortality. That may be a problem in itself, but it is not the problem of the struggle for exist-

ence. When an avalanche or a landslide, on any scale we please, or a sudden fall of temperature, or a great drought, or any catastrophe wipes out whole regiments of living creatures, the struggle for existence is *not* illustrated, for the essential idea in the concept of struggle is that the living individual answers back. When on the summer evening the mayflies rise like a living mist from the quiet reaches of the river, and in some cases end their ephemeral aerial life before the twilight is past, there is assuredly great mortality, but there is not in the dying any struggle for existence. They die off in the crisis of giving origin to the next generation, and as they may have spent two or three years of larval sub-aquatic life they may be at their death quite old as insects count age. Similarly, when the baleen whale rushing through the waves engulfs myriads of sea-butterflies in the huge cavern of its mouth, there is great mortality, but no struggle for existence. Nor is there when the squirrel has a meal of beech-nuts, each of them a young life.

The essential idea, often missed, is that the struggle for existence is *the clash between life and its limitations*, when life insists on its rights and answers back. When organisms react to their limitations and difficulties, when they do not meet these passively, but thrust and parry, experiment and actively evade, and in a hundred ways say "We will live",—there is the struggle for existence. The essence of the struggle is the endeavour after well-being.

Another point, somewhat difficult at first sight, is that inter-specific struggle for existence is not illustrated when all the members of a species meet a difficulty by the same adaptive response, the capacity for which is now ingrained in their constitution. Thus many species offer interesting

solutions of the problem of meeting the winter; the brown stoats, for instance, by becoming white ermine. But nowadays the stoats cannot help changing their robe; in the same locality they all do it equally well; the ingrained capacity is the indirect outcome of the struggle for existence in the distant past; the stoat's present-day struggle for existence is to be found elsewhere. Inter-specific struggle for existence implies individual and novel reactions and responses to environing difficulties and limitations. As we understand it, inter-specific struggle for existence cannot be illustrated in regard to adaptations shared equally by all the members, but it may be illustrated if there are inequalities in these adaptations, or in the way they are used, or in individual adjustments.

It should also be noted that it is a confusion of thought to identify the struggle for existence with Natural Selection. The concept of struggle is wider than that of selection. The struggle for existence is to be found in the reactions between organisms and their environing limitations, which may include, of course, the presence or antagonism of other organisms. When inequalities or idiosyncrasies in the reactions or responses are of life-saving importance the result is discriminate elimination and the survival of the relatively fitter to the given conditions. But in many cases the result of the struggle for existence is not discriminate elimination. There may be nothing more than a lessening of population-pressure by a large reduction of numbers. And even when discriminate elimination does occur, it may work as slowly as the mills of God. Some writers speak as if a decision was always given there and then. But that is a misunderstanding. The elimination may take the form of gently handicapping those who lack what others have,—handicap-

ping them so that they have a rather shorter life or a rather less numerous or less successful family. This is precisely what eugenists of the gentler persuasion wish to see in operation in mankind—the replacement rather than the destruction of the baser sort.

As is well known, the struggle for existence takes three main forms:—(a) between fellow-organisms of the same kith and kin, (b) between foes of entirely different kinds, and (c) between living creatures and the physical fates.

In regard to the first, Darwin headed a paragraph “Struggle for Life Most Severe Between Individuals and Varieties of the Same Species”, and that paragraph, along with a subconscious desire to get a theoretical backing for individualistic human practices, has given rise to the widespread idea that what is most characteristic of Nature is an internecine competition of near kin for food and foothold.

But it is very profitable to examine Darwin’s evidence for his momentous conclusion. Not that we doubt that keen competition between fellows is one mode of the struggle for existence; the point is to what extent it obtains. The gladiatorial show conception of Animate Nature is illustrated by the supposed internecine competition between brown rat and black rat, and might almost be called the rat theory of life. The story of this internecine competition, for which Darwin is largely responsible, is well known, but it suffers from the demerit of not being quite true. Long ago Britain had only the Black Rat (*Mus rattus*) which probably came from Asia through Mediterranean ports. It seems to have been introduced into Western Europe by the ships of the Crusaders. The Brown Rat (*Mus decumanus*), also of Eastern origin, was a later arrival, becoming common in the early part of the eighteenth century.

Now the story which had till recently all the expert authority behind it, is that the larger, stronger, fiercer Brown Rat killed off the Black Rat everywhere, and by competition to the death took its place. But the account of the matter given by Dr. Chalmers Mitchell is very different. The Black Rat is far from being extinct in Britain; it is wild and shy, much more active than the Brown Rat; it is the typical barn and granary rat. The Brown Rat is more of an outdoor creature, though the haunter of sewers and drains, to the great extension of which it probably owes a considerable part of its success.

Let us allow that the ranks of the Black Rat have been increased by fresh imports; let us allow that it once was the 'common rat' and is so no longer; let us even allow that if representatives of the two species are shut up in a cage together (a condition of which there are few counterparts in nature!) the brown rats will kill the blacks; yet the edge has been taken off Darwin's famous illustration,—the best piece of evidence he adduced in support of his thesis. As Dr. Chalmers Mitchell says, "In this story of the rats, which has been very carefully investigated, there is no trace of a process comparable with the German theory of war as an instance of the struggle for existence. . . . Each species has its different aptitudes, capacities, and preferences, and each insinuates itself into the most suitable environment" (1915, p. 30). The internecine competition has not taken place. A compromise was effected.

The second form of the struggle for existence is between animate foes of entirely different kinds, between herbivore and carnivore, between birds of prey and small mammals, between the grass and the other plants of the meadow, between the thorns and the seedlings in the stony ground.

Here the competition is sometimes keen, but sometimes a very one-sided affair.

The third form of the struggle for existence is between living creatures and the callous and changeful physical environment. Thus Darwin spoke of the struggle of the plant at the edge of the desert, and one thinks of reactions of animals against the winter's cold, and so on. This is obviously non-competitive; it is crossing swords with Fate.

So we see that in the struggle for existence between organisms and the inorganic environment, the element of direct competition is always absent; in that between organisms of entirely different kinds whose interests conflict it is often absent; and even in the struggle between members of the same kith and kin the supposed state of internecine warfare is often conspicuous by its absence. The furious battles between different kinds of ants, and between disorganised hives of bees, and between true ants and white ants, are among the few phenomena in the animal world that suggest human warfare.

It may be said that this is surely cutting at the roots of Darwinism (Natural Selectionism) to deny that fellows of the same kith and kin are sifted *inter se*, but we make no such denial. Our doubt is as to whether the sifting is *often* effected by internecine intra-specific competition. Individuals possessing an advantageous variation which enables them to meet difficulties successfully are favoured by Natural Selection, as the phrase has it; our point is that their success does not necessarily depend on any warfare or competition with their fellows. When a plague enters a household and only one member survives, he does so because his constitution successfully parried the microbe, not by any competition with his brothers and sisters. When the last

rabbit in the scamper towards the warren is caught by the fox, his elimination is not the result of there being others of his kind who are more alert and agile. The barbarous proverb *Lupus lupus lupus* was invented by Man as an excuse for his own unnatural behaviour, and there is much better biology in Kipling's *Jungle Books*.

§ 4. *Correction of Some Misconceptions of the Struggle for Existence.*

A number of attempts have been made to correct the idea which has taken such firm hold of men's minds that Nature is in a state of ceaseless warfare and that there is especially frightful competition for food and foothold among the members of the same species. Thus Herbert Spencer was clearly of opinion that the purely self-seeking animal is a fiction. "Self-sacrifice is no less primordial than self-preservation." "From the dawn of life, altruism has been no less essential than egoism."

Darwin himself in *The Descent of Man* showed that in many animal societies the struggle between individuals disappears, being replaced by co-operation. Survival is not restricted to the strongest, but may reward those that give the best send-off to their offspring or excel in self-subordination and mutual support. "Those communities," he wrote (*Descent of Man*, 2nd Ed., p. 163), "which included the greatest number of the most sympathetic members would flourish best, and rear the greatest number of offspring." It should be remembered, too, that one of the tasks which Darwin proposed for himself, but did not accomplish, was an inquiry into the natural checks to over-multiplication.

Kessler, a Russian zoologist, brought forward evidence in support of the thesis that "in the evolution of the organic

world—in the progressive modification of organic beings—mutual support among individuals plays a much more important part than their mutual struggle”. Prof. Patrick Geddes also argued that the popular version of the Darwinian picture had become distorted into falseness, and advanced illustrations of the evolutionary rôle of other-regarding as opposed to self-gratifying activities, and of the survival-value of subordinating the self to the species. Prof. Henry Drummond in his Lowell Lectures gave an eloquent exposition of the importance of the struggle for others as contrasted with the struggle for self. Best of all, because most concrete, were Prince Kropotkin’s essays on Mutual Aid. With a wealth of illustration he showed the pervasiveness of mutual aid and mutual support in the Animal Kingdom. To him it seemed as much a law of life as mutual struggle, and “of the greatest importance for the maintenance of life, the preservation of each species, and its further evolution”.

Now while it is useful to hold over against aggressive competition the fact of mutual aid, there is a more radical way of stating the case. The idea of two struggles, one for self, and one for others, is artificial, and it must be borne in mind that there is much self-expression and much self-subordination which has no direct connection with struggle in the technical sense; witness, for instance, the expression of a well-adapted parental nature that is not meeting with any particular difficulties or limitations. How is the case to be stated? By going back to Darwin’s position. Self-assertive organisms, whose inmost nature is endeavour, find themselves faced with baffling difficulties, hemmed in by thwarting limitations. Whenever the creature answers back in an individual way, girding up its loins against these difficulties and hurling itself against these limitations, *there*

is the struggle for existence. But there are many different ways of answering back; there are many different cards that the organism can play. One creature uses its weapons with increased skill, another finds discretion the better part of valour; both are reacting in the struggle for existence. One creature intensifies its competitive efforts, another seeks to ensure the safety and success of its offspring; both are reacting in the struggle for existence. In the egg-capsules of the whelk some of the larvæ devour the rest—a grim cannibalism in the cradle—this is the one extreme, of which there are few illustrations. As nestling birds are only in process of becoming warm-blooded, it is of great importance in many cases that they should be surrounded by non-conducting materials. When we see an individual bird taking particular care to add feather to feather till there are over two thousand, we know that it is unmistakably strengthening its own and its family's foothold in the struggle for existence, but its reaction to environing difficulties does not hurt any other bird. This is at the opposite pole, and similar illustrations abound.

The race is not always to the swift nor the battle to the strong. The concept of struggle includes self-assertive competition, but it also includes a gentle endeavour after well-being. One creature asserts itself by sharpening its claws and whetting its teeth, another finds a place where it is invisible. One intensifies competition with its kin around the platter of subsistence—though this is much less frequent than is supposed; another expresses itself in more elaborate parental care. Nor can we forget that evasive change of habit and habitat known as parasitism—the door to which is always open. The organism has many a thrust and parry, —all of which are logically included in the conception of

reactions and responses to enviroing difficulties and limitations.

Thus the nightmare picture of the Struggle for Existence as "a dismal cockpit" gives place to a more accurate one. It is often an Endeavour after Well-being on a non-competitive basis. We see reason to regard as inaccurate the conception of Animate Nature as "all weather".

We must not allow interests other than those of accuracy and consistency to intrude in scientific inquiry, but the fact must be pointed out that vague views of what obtains in Nature have had a deplorable influence in human affairs. What was at first said almost in jest, "The struggle for existence—*laissez faire*—the survival of the fittest", has become to some a philosophy of life. There has been a sinister effect of careless Darwinism. As has been well said, "It has given the seeming sanction of science at one time to a soulless commercialism, at another to an overweening pride of race and the lust of dominion. By one of the paradoxes to which the history of thought is prone, the theory of progress has been in the main a weapon in the hands of intellectual and moral reaction. But every new theory has to go through its infantile diseases. The worst of these arises from that distemper of the mind, peculiarly prevalent in the half-educated world of modern thought, which prompts men to pick up ideas which specialists have elaborated for their own purposes in their own departments and apply them indiscriminately as catchwords to settle questions arising in another sphere."

What is fallacious in the careless Darwinism alluded to? There is: (1) a narrow and wooden conception of the Struggle for Existence which includes many endeavours that are not directly competitive at all; (2) a failure to perceive

that the survival of the fittest means only the survival of those relatively best adapted to particular conditions, which may be parasitism or (in some ants) slave-keeping; (3) a forgetfulness of the apartness of human society from the animal world with which it is nevertheless solidary—an apartness which forbids any uncriticised transference of a purely biological induction to social affairs; and (4) an ignoring of the historical fact, which we dare mention even after years of carnage, that the trend of civilisation has been away from the harsher forms of Nature's régime.

§ 5. *The Welfare of the Species.*

When we pass from the struggle for existence in its many forms to consider old-established activities which secure the welfare of the species, we arrive at a result which colours our whole view of Animate Nature, and is of great interest to philosophy,—to that philosophy at least which has one hand on Human History and the other on Natural History, and is as a daysman between them. Postponing the difficult question as to where we should draw the line which delimits set purpose, we find that a very large part of the time and energy of living creatures is given over to activities which do not make for self-increase or self-stability or self-preservation, but make for the welfare of the family, the kin, and the species.

To a degree which has not been adequately realised by naturalists, organisms are adapted to, and give themselves up to securing the welfare of their race. In their multiplication, in their reproductive processes, in their parental care, individuals spend themselves in activities which are often not to their own advantage. Their personal interests have been subordinated to those of the species. They are borne

on by impulses and instincts which are as compelling as hunger and thirst, but the satisfaction of these rarely makes for individual advantage. Indeed it is often fatal. Reproduction is often not merely the distant beginning of the individual's death, but has death as its immediate nemesis. In some higher animals love is its own reward and the parental life is enriched by the family, but this is true only of a minority. Even sexual gratification is as often absent as present. According to Goethe, Nature holds that for the pains of a lifetime it is fair payment to get a couple of draughts from the tankard of love. But many animals have only one draught and many none at all. How many insects there are, with a parental solicitude and an elaborateness of care that strikes one dumb, who have not even the psychic reward of seeing the offspring for the good of which they more or less unwittingly spend themselves.

Professor Cresson (1913) has done a notable service in illustrating with accuracy and learning the extent to which there is subordination of the individual to the species. There is the physiological cost of producing germ-cells, so obvious in some fishes; of nourishing the young before birth—familarly great in most mammals; of feeding the offspring after they are hatched or born—as in many insects and almost all birds and mammals. There is the danger and exhaustion of reproduction, for many female organisms die of it, and the drone-bees are far from being the only males that are sacrificed on the altar of sex.

Taking birds, for instance, we are all more or less familiar with the work of nest-making (MacGillivray counted over two thousand feathers in the nest of the Long-tailed Tit), with the patience of brooding (sometimes involving fatal exposure), with the prodigious industry exhibited in feeding

the family (the parent bird wearing itself to a skeleton), with the self-forgetfulness shown in guarding, cleaning, and educating the young. But have we sufficiently weighed the general fact that although it is the birds' meat and drink to do all this, it is not self-preservation at any rate that results? Many adult insects spend by far the greater part of their time and energy in securing the safety of their eggs and the nourishment of the young. It is hardly an exaggeration to say with Cresson: "Everything for the species; everything by the individual; nothing for the individual."

What difficulties often lie in the way of the fertilisation of the egg-cell! How many tens of thousands of years, how many variations, how much vital energy, how much searching elimination have gone to the establishment of the adaptations which secure this end,—the fragrance, the flags of colour, and the strategically placed nectaries in flowering plants, the imperious desires, the intricate attractions, and the subtle psychical embroidery in the case of animals. There are parallel adaptations of structure and habit, which secure the welfare of the young.

The fact which must be included in our conception of organic life is the amount of energy that is expended towards the maintenance of the species rather than towards self-preservation and self-gratification. Animals have become organically interested in working for the species, and even though they know it not, their individuality completes itself in the larger life of their race. What it seems to mean, according to current evolution-theory, is that variations (probably altogether germinal to begin with) in directions which made for the welfare of offspring, family, society, or species, have been established in the course of selection no less securely than those which made for self-preservation. Meta-

phorically speaking, we may say that this has been Nature's way of setting the seal of her approval on altruistic behaviour, even when the animal's left hand does not know what its right hand doeth.

§ 6. *As regards Warfare.*

The position here defended has an obvious practical interest,—in reference to war, for some have seriously maintained that human warfare has what is called 'Nature's sanction', that it is consonant with what goes on throughout Animate Nature, which is believed to be in a state of universal Hobbesian warfare, each against all, and no discharge for any. Moreover, human warfare is declared to be a continuation of a natural process which necessarily leads to the survival of the relatively more fit. In the words of von Bernhardt: "Wherever we look in nature, we find that war is a fundamental law of evolution. This great verity, which has been recognised in past ages, has been convincingly demonstrated in modern times by Charles Darwin."

Prof. Karl Pearson has given strong expression to the view that a nation should be "kept up to a high pitch of internal efficiency by insuring that its numbers are substantially recruited from the better stocks, and kept up to a high pitch of external efficiency by contest, chiefly by way of war with inferior races, and with equal races by the struggle for trade-routes and for the sources of food supply" . . . (1901, p. 44). "When the struggle for existence between races is suspended, the solution of great problems may be unnaturally postponed; instead of the slow stern processes of evolution, cataclysmal solutions are prepared for the future." . . . (1901, p. 20). "There will be nothing to check the fertility of inferior stock; the relentless law

of heredity will not be controlled and guided by natural selection. Man will stagnate" . . . (1901, p. 24). Thus imperialism and militarism find theoretical justification,—even from one who is quite clear that "the safety of a gregarious animal—and man is essentially such—depends upon the intensity with which the social instinct has been developed". "The stability of a race depends entirely on the extent to which the social feelings have got a real hold on it" (1901, p. 47).

We need not raise the question of the wisdom of appealing to Nature for ethical guidance, nor dwell on the danger involved in the fact that the Darwinian concept of struggle arose historically from a consideration of human problems; there are more important things to say. First, as we have seen, internecine competition among near kin is only one mode of the struggle for existence. Especially among the finer forms of life do we find that the answer-back which is given to the environing limitations is less and less frequently an intensification of competition, is more and more frequently something subtler, some modification of parental sacrifice, some co-operative device, some experiment in sociality. Dr. Chalmers Mitchell goes the length of saying (too strongly, we think) that "the struggle for existence as propounded by Charles Darwin, and as it can be followed in Nature, has no resemblance with human warfare" (1915, p. 108). And again, as entirely independent confirmation of what we have maintained in *Darwinism and Human Life* (1909) and elsewhere, we may quote this interesting passage: "Looking through the Animal Kingdom as a whole, and remembering that the Vegetable Kingdom is as much subject and responsive to whatsoever may be the law of organic evolution, I find no grounds for interpreting

Darwin's 'metaphorical phrase', the struggle for existence, in any sense that would make it a justification of war between nations. It is my business just now to refute a misconception of the struggle rather than to explain what it is. But, if the latter were my task, I could adduce from the writings of Darwin himself, and from those of later naturalists, a thousand instances taken from the Animal Kingdom in which success has come about by means analogous with the cultivation of all the peaceful arts, the raising of the intelligence, and the heightening of the emotions of love and pity" (1915, p. 41).

Second, in spite of the one hundred and fifty definitions of war, we may venture to regard the essence of it as an organised flesh and blood struggle between communities or nationalities, and if this be so its analogue is to be looked for in the quite exceptional group-competition which sometimes occurs among some social insects, notably among ants, and not in the competitive forms of the struggle which may occur between individual animals of the same species.

Third, as Dr. Chalmers Mitchell points out, the fallacious comparison between human warfare and the struggle for existence breaks down because "modern nations are not units of the same order as the units of the animal and vegetable kingdom" (p. 108). Nationalities "differ from the units of zoology and botany in that the individuals composing them are not united by blood-relationship. Even if the struggle for existence were the sole law that had shaped and trimmed the tree of life, it does not necessarily apply to the political communities of men, for these cohere not because of common descent but because of bonds that are peculiar to the human race" (p. 64).

The appeal to human history, which the militarists make

confidently, has seemed to many to show that civilisation was born out of war. Even Maine spoke of the "Universal belligerency of primitive mankind". But scientific inquiry does not confirm this conclusion. In a valuable article Mr. Havelock Ellis (1919) makes the following points: (1) Chellean man, who first used permanent and indubitably human tools, may have lived about 27,000 years ago, so that our 'historical' period does not cover a large part of our history. But what Palæolithic weapons and art suggest is in the main hunting not fighting. (2) If the culture of the primitive Mousterians survives among the Australians, that of the Aurignacians among the Bushmen, and that of the Magdalenians among the Eskimo, what the study of these contemporary ancestors of ours seems to show is that war, apart from regulated punishment and blood-vengeance, is almost unknown. 'Savages' are on the whole not warlike. (3) "War probably began late in the history of mankind, it developed slowly out of animal hunting by way of a regulated attempt to secure justice as well as the gratification of revenge, it was immensely stimulated by the discoveries of the metals, and especially iron; above all, it owed its expansion to two great forces, the attractive force of booty and commercial gain in front, and the propulsive force of a confined population with a high birth-rate behind. . . ." "War was a result, and not a cause, of social organisation."

We think that there is a risk of exaggerating the importance of a high birth-rate as a factor in the evolution of warfare, for primitive peoples had their own rough ways of keeping a population balance. Perhaps, again, Mr. Ellis underrates the importance of variation—especially social variation—as a cause of war. Therefore while it is with

conviction that he looks forward to the control of the birth-rate and to the regularisation of industrialism as likely to bring wars to an end, we should add as a more positive pacific factor an increase of inter-relations which will promote tolerance for, and intelligent appreciation of those who are very different from ourselves.

But the immediate point is that the militarists' appeal to history is not any more convincing than their appeal to biology. The facts are against them in both fields.

The third appeal of the militarists is to ethics, and may be illustrated by Moltke's famous letter of 1880—"Eternal peace is a dream, and not even a beautiful dream, and war is a part of God's world-order. In war are developed the noblest virtues of mankind; courage and sacrifice, fidelity and the willingness to sacrifice life itself. Without war the world would be swallowed up in materialism." There are two half-truths here. The first is that war does evoke noble virtues; the missing half is that there are other endeavours outside of war that may evoke these virtues not less well, and much less wastefully. Moreover, no one can forget that war evokes other qualities than virtues. The second half-truth is that struggle and sifting seem to be needed for the welfare of humanity; the missing half is that war is only one of the many forms of struggle. As Havelock Ellis tersely puts it, "Conflict is a genus with many species, of which war is only one"—and one of violence, from which at every level it is the effort of civilisation to deliver us. Struggle we can never do without, but of war the world has had more than enough.

Let us state the case more generally. Endeavour and sifting are surely conditions of progress, but war between races is only one mode and it seems very doubtful that it

makes for real superiority. If the energy misdirected by the facile acceptance of bad biology were turned to practicable eugenics, to hygienic reform, to inter-national adventure, if men looked out for the "moral equivalents of war", there might be a way out of the impasse which Prof. Karl Pearson pictures as inevitable if there is cessation in the struggle of race against race. Are we not beginning (to use Prof. Lovejoy's words) "to recognise that the effort to cram the moral ideas of civilised man into the rigid mould of the natural selection hypothesis is an artificial and not very promising enterprise" (1909, p. 99)?

Furthermore, when Man has recourse to internecine competition among fellows,—to what is, let us say, remotely analogous to a primitive and crude form of the struggle for existence—exhibited by *amœbæ*, if not by rats—he cannot console himself with the belief that this must result in the survival of the fittest in any desirable human sense. For the struggle for existence need not result in the survival of the strongest, cleverest, or best. It never results in more than the survival of those relatively more fit to the given conditions, and these may be on the downgrade, not on the upgrade. As a matter of fact, there is considerable reason to believe that, as regards the members of either side, war acts on the whole dysgenically, by sifting out those whom the race can least afford to lose.

IN CONCLUSION.

It is not maintained that there are no shadows in Nature—'wildness', wastefulness, parasitism, and even, at times, positive disharmony—but, postponing a discussion of some of these difficulties, we are concerned here to point out that although there is in the routine of Animate Nature much

hunting and being hunted, much devouring and being devoured, that is only one side of the picture.

Outside the struggle for existence in the strict sense there is undeniably a large amount of established self-preservative routine, but there is at least an equally large amount of established race-preservative routine. Our total impression must do justice to both sets of facts. And within the bounds of the struggle for existence in the strict sense there are many modes, some not strictly competitive at all. The struggle which Nietzsche saw in Nature and condescended to approve of, was not a scramble of starvelings around the platter of subsistence, but the elbowing and jostling of masterful individualities; and we maintain that much of this quality of insurgence is familiar to the field naturalist. But apart from elbowing and jostling, and apart from internecine competition and sanguinary combats, there is much of the struggle for existence which might often be quite accurately called the endeavour after well-being, and much, as Darwin emphasised, which may be described as self-subordinating experiment and effort to secure the success of the offspring.

SUMMARY.

Some students of the tactics of Animate Nature have discerned in them little to admire and less to imitate. Huxley and James are here in agreement. Others, such as Geddes and Kropotkin, have discerned a materialised ethical process. The discrepancy is partly due to focussing attention now on 'hunger' and again on 'love', now on 'egoistic' and again on 'altruistic' activities, now on self-preservation and self-increase and again on race-continuance and eugenic success. Both sets of facts must be kept in view.

The twofold business of living creatures is caring for self and caring for others. Hunger and love, in the widest sense, form the subject and the counter-subject of the great fugue of life. In satisfying these imperious primal impulses the organism encounters

obstacles, and the inmost secret of life, from first to last, is endeavour. The perennial problem is to adjust relations between the self-expression of the organism and the indifference, or hostility, or conflicting interests in its environment.

All the fresh reactions and responses which living creatures make to environing difficulties and limitations are summed up in the Darwinian concept of the Struggle for Existence which has suffered from widespread misunderstanding. As is well known, the three main difficulties are those involved in the tendency to over-population, in the nutritive dependence of one creature upon another, and in the changefulness of the environment. As is also well known, the struggle takes three main forms,—between fellows of the same kith and kin, between foes of entirely different kinds, and between organisms and their inorganic surroundings. But what is less clearly recognised is that the struggle need not be directly competitive, need not be sanguinary, need not lead to elimination there and then, and that it is often more accurately described as an endeavour after well-being. The race is not always to the swift, nor the battle to the strong, for, as Darwin clearly recognised, survival may be the reward of those who give the best send-off to their offspring, or to those who vary most in the direction of self-subordination.

Corrections of the idea that the struggle for existence is necessarily an internecine competition between kin around the margin of subsistence (of which there are remarkably few good illustrations) have been offered by Spencer, Kessler, Geddes, Drummond, Kropotkin, and others. And Darwin safeguarded himself carefully. Instead of opposing "Struggle for Self" and "Struggle for Others", or "Mutual Struggle" and "Mutual Aid", it is scientifically clearer to recognise that the concept of Struggle includes all the reactions and responses which individual organisms make in face of difficulties. Intensifying competition is one mode, an elaboration of parental care is another, an experiment in parasitism is another, a new departure in sociality another, and there are many more—all of which pay. Thus the nightmare picture of the Struggle for Existence as "a dismal cockpit" gives place to a more accurate one, which is more conformable with the assumption that Nature is not "all weather" or "a moral multiverse".

The competitive form of the struggle for existence is not illustrated when all the members of a species meet a familiar difficulty with equal effectiveness, the capacity for the response being ingrained in the constitution. But it is interesting to turn to these

securely established ways, to see how large a proportion of the energy and time at the disposal of living creatures is spent in activities which make not for self-increase, self-stability, or self-preservation, but for the welfare of the family, the kin, and the species. Neither naturalists nor philosophers have adequately realised the extent to which there is throughout Animate Nature a subordination of the individual to the species. Survival is often the reward of the individualistic competitor, but not less frequently of those with a capacity for self-forgetfulness.

There is little in common between the Darwinian struggle for existence and human warfare. Modern nationalities are not comparable to individual organisms. Even if the analogy were closer it would afford no biological justification for war, for natural selection in the struggle for existence results only in the survival of the relatively more fit to given conditions.

LECTURE X.

ADAPTIVENESS AND PURPOSIVENESS.

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- § 1. *Animate Nature Abounds in Adaptations.* § 2. *Their Origin neither by Design nor Mechanical.* § 3. *Is There 'Purpose' in the Inorganic Domain?* § 4. *Purposefulness and Purposiveness in Human Behaviour.* § 5. *Purposiveness and Purposefulness in Animal Behaviour.* § 6. *The Purposelikeness of the Ordinary Functioning of the Body is Covered by the Concept of Adaptation.* § 7. *Provisional Conclusion and Anticipation.*

OUR survey of the Realm of Organisms as it is affords evidence in support of the following propositions: (1) that living creatures are individualities standing apart from things in general and not exhaustively described in mechanistic terms; (2) that their lives abound in behaviour with a psychical aspect; (3) that there is in Animate Nature a prevalence of orderly systematisation, balance, and smooth working; (4) that there is a pervasive beauty both hidden and revealed; and (5) that a very large proportion of the time and energy at the disposal of organisms is devoted to activities which make not for self-maintenance and self-aggrandisement, but for the continuance and welfare of the race. In fact, we find in Animate Nature far-reaching correspondence to the ideals of the True, the Beautiful, and the Good—correspondences which may suggest to some a possible line of development for Natural Theology.

§ 1. *Animate Nature Abounds in Adaptations.*

A survey of the realm of organisms affords another great impression and that is the prevalence of adaptations. "The

narrowest hinge in my hand puts to scorn all machinery"; the hand as a whole is the subject of a Bridgewater Treatise. The Vertebrate eye is extraordinarily well adapted, in spite of the instrumental imperfections which Helmholtz discovered. The functional correlations of internal organs such as heart and lungs are as effective as they are delicate. The flat-fish is so adaptable in its coloration to the pattern of the sea-floor on which it rests that it has practically a Gyges ring, making itself invisible, sometimes almost instantaneously. Flowers and their welcome insect-visitors are suited to one another as glove to hand. The realm of organisms abounds in adaptations, some extraordinarily perfect, some in process of becoming perfect.

First there are the *structural* adaptations of the organism—some with internal and some with external reference, some static, some dynamic. The internal structure of a long bone or of the stem of a plant is suited in detail to stand the strains and stresses to which it is exposed. The same quality of architectural stability may be seen everywhere from the scaffolding of a siliceous sponge like Venus's Flower Basket to the spine of a sea-urchin, from the spirally twisted encasement of an arenaceous Foraminifer to the prismatic structure of the enamel of our teeth.

Less static are the adaptations of parts that move and work. The adaptations of a bird's skeleton for flight and for bipedal progression are many and thorough. The heart is a masterpiece of fitness, and in many cases, as in the antelope on the plains or in the ptarmigan on the high mountains, there are interesting special adaptations of the heart to stand special strain. The delicacy and complexity of the mouth-parts of such insects as mosquitoes may well evoke the artificer's admiration.

Of great interest are the co-ordinating *functional adjustments* which secure smooth working. A fine example is the heat-regulating arrangement or thermotaxis of birds and mammals, which adjusts the production of animal heat so as to meet the loss. Superimposed on this, as it were, are the special adjustments which bring about winter-sleep in hibernating mammals. And there is no internal regulation more worthy of our admiration than the manner in which the mother-mammal is functionally prepared for the antenatal development of the offspring and its nurture after birth. The adaptive regulatory rôle of the internal secretions is one of the most fascinating chapters in modern physiology.

Inexhaustible, again, are the illustrations of the manner in which living creatures are adapted to the particular conditions of their life. The mole, living underground, is adapted in its short vertical fur and in the absence of an ear-trumpet to the reduction of friction in burrowing; its hand has become an extraordinary shovel and its shoulder-girdle and associated musculature are powerfully developed; the minute, imperfectly developed eye is good enough for what is required of it, and it is hidden by hair so that it does not get rubbed and become a source of weakness; and so the zoologist goes on.

We may also refer to the theoretically very interesting *inter-organismal adaptations*. These may be between organisms of the same kind, between parent and offspring, between male and female. Even the male parent may be adapted to the offspring as we see in the pouch of the sea-horse, and in the still more striking case of the New Guinea fresh-water fish called Kurtus, where a hooked bony process grows from the top of the male's head at the breeding season and serves for the suspension of the bunch of

eggs. The young marsupials are born prematurely and cannot even suck; the mother places them in her external pocket of skin and has a special arrangement for forcing the milk into their mouth. They meet this, so to speak, with a special adaptation that prevents the milk going down the wrong way.

There are also inter-organismal adaptations between creatures of different kinds, of which the crowning examples are to be found in the way certain flowers and certain insects are suited for making the best of one another. Very striking also are the numerous mutually helpful associations which have been established—partnerships, commensalism, and symbiosis, in which there is sometimes two-sided adaptation. The case is repulsive, but the parasite is often adapted to its drifting life of ease and to making much of its host, which, in turn, is often adapted so that it hardly suffers at all from its guest. In the mimetic resemblance of one creature to another there is again adaptation, often of almost incredible subtlety.

In Indo-Pacific crabs of the genus *Melia* a delicate sea-anemone is often carried on the forceps, and probably serves to paralyse the crab's prey with its batteries of stinging cells. It is quaintly suggestive of a tool, and its occasional absence shows that it is not vitally necessary. But the partnership or commensalism is probably of very old standing, since the denticles of the forceps are elongated into needles which are adaptively suited to keeping a firm grip of the 'tool'.

We are accustomed to the idea of adaptations, but perhaps we are not sufficiently appreciative of their nicety. When winter sets in, the North American ruffed grouse puts on snow-shoes—a row of projecting plates on each side of each toe so that the bird can tread on the loose snow without

sinking in. The African egg-eating snake, *Dasypeltis*, has very few teeth and it would not be profitable to crack the eggs in its mouth; the egg slips intact into the gullet, where it is met by the sharp points of the inferior spines of a number of vertebræ. These project into the gullet and cut the egg-shells, so that none of the precious food is wasted. The spines are said to be actually tipped with enamel, the hardest of all tissues. The empty broken egg-shells are always returned.

An adaptation that gives us pause is the 'egg-tooth' found at the tip of the bill in many young birds, and used by them to break a way through the imprisoning egg-shell. It is a hard thickening of horn and lime at the tip of the bill, and since it develops before the horny ensheathment of the beak it may be a residue of a very ancient scaly armature in Reptilian ancestors of birds. Be this as it may, the instrument is an effective one and it is used only once! What happens is this: the young bird ready to be hatched thrusts its beak into the air-chamber that forms at the broad end of the egg; air rushes down the nostrils and fills the lungs for the first time; in the exhilaration of this first breath the unhatched bird knocks vigorously at the shell and breaks open the prison doors. After a few days, in most cases, the egg-tooth, having done its work, falls off,—a well-adapted instrument that functions only once.

But there is a further detail which is of much interest. The bill and its egg-tooth are only the instruments; what about the musculature which works these? Prof. Franz Keibel has inquired into this in the case of the unhatched chick and duckling. He finds that the work is done by a muscle called the *musculus complexus*, and that this is very markedly hypertrophied for some time before hatching. On

the tenth day after hatching, it shows no peculiarity. Here, then, we have a simple instance of the way in which development proceeds *as if it were working with a purpose*. How comes that musculus complexus to be temporarily exaggerated in strength, in relation to the breaking of the egg-shell,—an action which only occurs once in each generation?

The idea of adaptation is sometimes held far too narrowly, and a needless difficulty is made over the fact that some specific characters are not known to be adaptive to any particular condition of life. But, in the first place, some characters supposed at first to be quite indifferent have been shown, after closer acquaintance with the creature, to be finely adaptive. And, in the second place, an organism is not a system of pegs on which a hundred 'characters' are hung, it is a harmonious unity, viable and persisting in virtue of its subtle internal equilibrium as well as in virtue of the adjustment of its *tout ensemble* to the conditions of life. Adaptation may have an internal as well as an external reference.

Beyond particular instances of organismal adaptation, we have the broad fact that in a given association of organisms a balanced *modus vivendi* is arrived at, a compromise between competing interests, so that the system persists and works smoothly. The balance of nature is the largest of all adaptations. Just as the *Systema Naturæ* of the taxonomist—the orderly classification of the classifier—speaks of rationality; so the vital *systema naturæ* which the naturalist discloses is also a cosmos. There is a systematisation or co-ordination of lives, world-wide in its scope, and becoming ever more subtle in its accomplishment.

§ 2. *Their Origin neither by Design nor Mechanical.*

Opposite the title-page of Darwin's *Origin of Species*, there is a quotation from one of the Bridgewater Treatises. A judicious quotation it is, but, as Professor Lovejoy points out, there is a historic irony in finding it at the outset of a book which was the death-sentence of the kind of argument most characteristic of the treatises in question. Darwin sought to show that, if copious variability be granted and abundance of time be allowed, then Nature's sifting—the process of Natural Selection—will account for all the striking adaptations from which many thoughtful observers had been wont to argue directly to theism. He says himself: "The old argument from design in nature . . . which once seemed to me so conclusive, fails, now that the law of natural selection has been discovered. We can no longer argue that, for instance, the beautiful hinge of a bivalve shell must have been made by an intelligent being, like the hinge of a door by man. There seems to be no more design in the variability of organic beings, and in the action of natural selection, than in the course which the wind blows."

Now we cannot return to any crude form of the old idea that the thousand and one adaptations of organisms, which gratify our sense of fitness, are the direct outcome of the design of a divine artificer. It is agreed that they have been more or less gradually evolved by the operation of natural factors. They have been wrought out in what is often called Nature's workshop.

On the other hand, we cannot accept Darwin's statement that the evolution of adaptations is comparable to the work of the wind among the snow-drifts. The inadequacy of the statement is fourfold.

(1) The raw materials of adaptations are variations or mutations—the precious idiosyncrasies of structure and function that are continually cropping up, that keep the realm of organisms on the move. Some of these variations may be accidental and some necessitated, but of many, especially those which may be called ‘new departures’, all we can say is that they arise,—apparently from within the arcana of the germ-cells. They look like expressions of inherent creative spontaneity, like experiments in self-expression. And it must be remembered that a germ-cell is not an ordinary cell, but a condensed implicit individuality, rich in the gains of the past, rich in possibilities for the future,—a psycho-physical being telescoped down. In any case, while our ignorance of the origin of variations remains, as in Darwin’s day, profound, there is no reason why the *argumentum ad ignorantiam* should favour mechanistic interpretation. The fact is that we cannot at present give a mechanical account of the origin of the crop of variations from which Nature’s weeding removes the tares. We always reckon without our host in Biology when we leave life out.

(2) An important idea, which we cannot at present elaborate, is that the variations or new departures which take hold must not be inconsistent with the already established organic architecture. Just as the architect or the crystal must build congruently, so the varying organism must not contradict itself. The novelty must be in keeping or harmony with what has preceded, with what has already justified itself as fit. There are very few monsters to be seen in wild Nature, for they express a contradiction in terms and cannot live in natural conditions. Nay more, very few monsters ever appear in wild Nature, for the germ-cell must be a viable unity, and even in its experiments it is

controlled by the past to hold fast to that which is good. It is a very interesting fact that some monsters have been experimentally produced by disharmonious mongrel fertilisation of egg-cells.

(3) It is admitted that one of the characteristics of 'Nature's workshop' is the number of automatic arrangements. In making a machine an artificer literally selects; in establishing a breed of animals Man literally selects; but Natural Selection is a metaphorical term,—the sifting is very largely automatic. The survivors survive automatically in virtue of the possession of certain advantageous qualities; the eliminated disappear automatically because of the absence of certain advantageous qualities or the presence of others that are fatal. But this is not the whole truth.

The selection that occurs is not haphazard; it bears some relation to the previously established external systematisation which we call the web of life, just as social criticism which makes it difficult for the unreliable to get on is not haphazard, but bears some relation to previously established traditions and standards. The elimination in either case is remote from fortuity or capriciousness. It always has, of course, an immediate reference to the present and not to the future; but the present has been determined by a past selection of the fit and embodies that selection in an objective sieve of great subtlety. Since the sieve is a systematisation of fitness, it tends to sift towards fitness in the future as well as in the present—unless, indeed, the conditions of the future should greatly change.

Let us repeat this argument. There is in each case a line of evolution that pays; it has been reached by past variations; new variations that are congruent with the past are on the whole most likely to appear and to catch on; there-

fore a variation may have a prospective value. Moreover, the external systematisation which forms the sieve is the embodiment of the results of ages of sifting. Therefore fortuitousness dwindles away. Sir Ray Lankester is inaccurate in speaking of evolution as a "chapter of accidents".

(4) Again, we must bear in mind that in addition to varying, organisms often take an active part in their own evolution. They are anything but passive in a game Fate plays. They may select the environment that suits them, and play the cards with which variability supplies them. And this is not automatic. If a change in instinctive behaviour (*e.g.*, that exhibited in fashioning a wasp's nest) be the outcrop of a germinal mutation, it is not likely to persist unless it is congruent with the previously established routine, and it is not likely to come to stay unless it pass muster in the individual apprenticeship when novelties are tested, an apprenticeship in which, according to some careful students of behaviour, the slender rill of intelligence is sometimes to be detected even in those creatures most thoroughly dominated by instinctive equipment.

We see, then, that it is not legitimate to say that a mechanistic description has been given of the establishment of adaptations, or even to say, without qualification, that they have been turned out automatically in the workshop of Nature. Darwin's comparison of the process to the work of the wind expressed an error of judgment, for the blowing of the wind is altogether mechanically necessitated, and we cannot admit that this is true of organic evolution where individuality exists and counts.

But let us suppose that we have made some mistake in our argument, and that evolution is more, not less, automatic than Darwin believed. What then? We look with great

satisfaction at a contrivance like a linotype printing machine, or a monorail engine with its equilibrating gyroscope, or at a watch (had not Bridgewaterism made us tired of it); they all show much skill on the part of the artificer—the original artificer at least. If we were told, however, that the contrivance we admire was not made by an artificer at all, but was turned out by an automatic machine, our admiration would simply be shifted to the designer or artificer of the original automatic machine, and we should admire all the more if the original device was very simple. So in Biology, the basal fact remains that organisms have had, and still have, the capacity of evolving adaptively. They have it in virtue of certain intrinsic qualities, previously discussed, which are much more striking than ready-made fitnesses. It is because living creatures are irritable, persistent, registrative, variable, and so on, that they have been able to evolve in a consummately adaptive way. This was, of course, what Charles Kingsley had in mind in his immortal child's-story when he put into the mouth of Mother Carey the words: "I make things make themselves." This is a very different view, it must be remarked, from that of an infinite regress of automatic machines, with no original designer at all; for this does not seem to us to be a clearly conceivable idea.

Time was when the multitudinous fitnesses of Animate Nature were the subject of admiring wonder, but this has shrivelled. Surely, however, the loss of wonder is not altogether creditable. If an adaptation is wrought out gradually by a co-operation of factors, that is just as wonderful as a special creation at the hands of a divine artificer; and it is more intelligible. And even if the process of evolving adaptations should turn out to be more automatic than it

seems to us to have been, it remains very wonderful that living creatures should be so adaptable, should have so rich a capacity of supplying the raw materials for adaptations.

§ 3. *Is There 'Purpose' in the Inorganic Domain?*

Leaving in the meantime the fact of almost universal adaptiveness in the realm of organisms, let us turn to the difficult problem of purpose. In the inorganic domain we see the river carving its course in the rock, the wind blowing the snow into beautiful wreaths, the various weathering processes making scenery, but these results are not adaptive to a future, and keeping to things as they are, we feel no reason to speak of purpose. The concept of purpose is irrelevant in the domain of the inorganic where there are no individualities and no alternatives, but rigorous concatenation and mechanical necessitation everywhere.

The hylozoist beholding the stream, flowing like an endless snake, may point to its enduring purpose. It sweeps some obstacles away and patiently undermines others; it bides its time with patience and overflows what it cannot circumvent; it consents to sinuous meanderings, and then, on a day of flood, cuts off a huge salient; it will even submit to an apparent death, becoming an underground current, if it may thereby accomplish its end of reaching the sea. But this remains fanciful and unconvincing: the stream is not a very long snake nor an individuality in any sense, it has no alternative in anything it does; it is not in the true sense an agent.

Two saving clauses are necessary. It is obvious that the inorganic domain is not chaotic, nor incoherent, nor ineffective. But it is without endeavour. It is orderly and stable, made to last, able to assume forms of great beauty, with

an interesting tendency to complexify under certain conditions, but it does not reveal any resident operative purpose. It will be understood that by 'purpose' in this discussion we mean intention, conative endeavour, anticipation of an end. We are not taking account of the employment of the word to denote use or efficiency, as when people say that the purpose of the elephant's trunk is to be a hand, or that a man worked to good purpose.

The other saving clause is, that we are not at present raising the question of the part that the inorganic has played in the world-wide genetic process in making organisms possible, and still plays in affording a basis for, and an opposition to the activities of organisms and personalities. The way in which a cradle and a home for organisms was made "when as yet there was none of them" is very remarkable (see Henderson, *The Order of Nature*, 1917), and will engage our attention later on. This may point to there having been a purpose in the institution of Nature, but not to there being a resident operative purpose in inorganic transformations.

§ 4. *Purposefulness and Purposiveness in Human Behaviour.*

The other pole is to be found in human affairs, where purposefulness dominates. When we give time and energy to some scheme or cause, we know that what we do is actuated by a clearly conceived purpose. No one can make sense of our life who does not recognise this, even if he call it the method in our madness. An anticipation, an ideal, with an associated tension of endeavour and glow of feeling, does as a matter of fact rule our will on many occasions. If this conceived purpose is not real, "with hands and feet",

we may abandon the possibility of either philosophy or science. Our life is at its highest efficiency when it is most dominated by purpose, when there is least of "the unlit lamp and the ungirt loin".

At a slightly lower level, however, we recognise analogous facts. We prepare for months to build a rockery in our garden, collecting stones and tree-roots and such like in a way that perplexes our next-door neighbour, who is not in the secret, who shakes his head at the absence of purpose in our behaviour. But all that we do is actuated by a purpose, so simple that we may call it perceptual, to form in the outer world an actual counterpart of a pleasing picture which had formed itself, as we say, in our mind. If this perceived purpose is not real, nothing is real. A mental anticipation with its associated desire determines our behaviour.

We feel no difficulty in the fact that the curious can give, if he will, a tolerably complete physiological account of our various activities in making the rockery—the collecting, the carrying, the digging, and the building. For we know that however complete such an account may be either at the chemico-physical level, or at the physiological level, it never comes near being a complete scientific account until it recognises the end which serves "as a point of connection for a plurality of causes", something which cannot be measured or weighed—the vision of the rockery as desirable. Not only *may* a teleological interpretation be put upon our behaviour; it *must* be put upon it, if we are to give a scientific description.

There are many difficulties in our way when we begin to draw conclusions as to the purposes of others, but there is certainty in regard to our own. We have direct experi-

ence of a clear outlook towards the future, of making plans, of desiring ends, of deliberately willing to realise an idea, of bending a multitude of means, often with some difficulty, towards a definite result, and so on. We cannot think of it without the concept of purpose. It is not merely that we put this finalistic interpretation on our conduct; we know that our purpose actuates our conduct. Among the conditions of our conduct we recognise ideal anticipations as dominant. As Lloyd Morgan puts it, there are psychological factors which we name "prospective significance and interest". "Pre-perceptive relationships have been established and highly developed. And such conscious relationships count, really count, every whit as much as any other natural relationship. They are not merely epiphenomenal phosphorescence; they are real conditions of the course of the process, both mental and bodily."

We must admit, then, the reality of purposeful self-determination. It is not that a psychical entity, called a purpose, functions; it is rather that our whole organism bends its bow in a particular direction and that we know this on the experiencing side as our conscious purpose and strengthen it in knowing it. We see, then, that in the human realm of ends the concept of purpose is essential; that in the inorganic domain, considered in itself, it is irrelevant; the question is as to the intermediate realm, and here the difficulties of interpretation are great.

This question of purpose is more or less clear when we are dealing with ourselves, but it becomes much more difficult when we pass to our neighbours. One of our neighbours behaves as we were doing and we credit him with the purpose of making a rockery. But it may be that he has some other purpose in view, or it may be that he is simply imitat-

ing us with a confidence that the result will be worth having. If there is this possibility of misinterpreting purpose within our own species, how careful must we be when we pass to animal behaviour.

We see a crofter making, year after year, a long line of the stones he has gathered from his field. We infer that he is arranging them so as to be least inconvenient. But one day he digs a trench beside the line and begins to lay the biggest blocks solidly within it. We know that he is going to build a wall. Now it is quite possible that this purpose was not in his mind when he began, and did not arise until the line of stones reached certain dimensions or until his clearance gave him a little leisure to think of a further improvement. This idea of an increasing purpose seems to be of great importance in Natural History, where a secondary end often appears to grow out of a primary one.

We inferred that the crofter was building a wall because we could not make sense of his activity on any other assumption; we argued by analogy from our own experience; and if we knew his language we could verify our interpretation by asking him what he was working towards. He would tell us that he had been working intermittently for years because he had the purpose of building a wall. The thought of the future wall was something actual which moved the crofter to will and to do. The thought and the will were in a real sense the ground of 'necessity of the wall, not less real than the stones.

But the convincingness of our interpretation of the crofter's actions as the outcome of his purpose rests, we must admit, on our recognition of him as a fellow-countryman, on his own assurance, and on parallels between his behaviour and

endeavours within our own experience. How careful we must be in regard to the purposefulness of animals who are very distantly related, whose language—if they have any—we do not know, whose behaviour is cast on different lines from ours.

When we see a blacksmith take a twisted shoe from a horse's foot, heat it in the fire, hammer it, cool it, file it, and so on, we know from the very first what his purpose is, and we understand more or less every step in relation to the obvious end. But if we watch a potter or a glass blower or the like for the first time we find it more difficult from what we see to prove that he is not amusing himself; he does things that we do not see the meaning of; he ends just at the last moment by turning out something which we did not expect. There is here the warning that a sequence may be actuated by purpose through and through although we do not recognise the domination—not even when we know the end.

§ 5. *Purposiveness and Purposefulness in Animal Behaviour.*

Let us pass to animal behaviour. When a dog hides an unfinished bone in a very unusual place; when Lord Avebury's dog Van goes to its box and brings out and arranges the letters T-E-A; when rooks take fresh-water mussels to a great height and let them fall on the shingle beneath so that they are broken; when a mother weasel, accompanied by one of her offspring, about to be overtaken on the links, seizes the youngster in her mouth, dashes on ahead, and lays it in a sandy hole; when beavers cut a canal right through a large island in a river; when mares, some past foaling, unite to lift up between them a number of foals on the

occasion of a great flood, and so on, we say, with probable accuracy, that the creature was actuated by a definite purpose, by some sort of intention, by some anticipation of an end. The validity of this undemonstrable conclusion depends (1) on the need of assuming some degree of purpose as the connecting thread which binds together the series of acts, and (2) on what we know in other ways of the creature's psychological analogy with ourselves. If the acts composing the chain are discontinuous, the need for postulating a bond of purpose is particularly evident. If the creature has a fine brain at a high structural level, as we know to be the case with dogs, horses, elephants, and the like, the legitimacy of inferring an actuating purpose is the more probable. It may well be that the purpose is not of the same nature as our purpose when we begin a day with the intention of economising our energies at every turn for a difficult task to-morrow, or of converting as many people as possible to an acceptance of methodological vitalism. It may be that the animal's 'purpose' is only a concrete picture with an associated desire,—a cognitive disposition at a perceptual level and an associated conative disposition. So it is sometimes in mankind, especially in childhood. But it will still be legitimate to describe the behaviour as purposeful, though the purpose was not a conceived purpose. For we mean by purpose an intention of the organism, involving a perceptual or conceptual anticipation of a desired end.

Difficulties in making sure that an actuating purpose is at work begin whenever we pass from ourselves to our neighbours; they increase when we pass to big-brained higher animals; they go on increasing when we pass to cases like that of a bird building a nest. The bird goes through a certain routine of collecting and interweaving materials,

of lining the interior with feathers—there may be over two thousand of them,—of covering the outside with lichens which make the nest almost invisible on the bough. There is no doubt as to the adaptiveness of the chain of acts; it seems clear that the work is without justification until it is finished; we cannot make sense of the prolonged activity unless we see the whole in the light of the final result which is of great value to the individual bird, to the nestlings, and to the species in question. But we are no longer so certain that the bird's behaviour is actuated by perceived purpose. We may know, for instance, that the bird never made a nest or laid an egg before; we know that there is a remarkable rigidity in the routine which sometimes detracts from its effectiveness; and that there are occasional aberrations which suggest that the bird is not quite on the spot. In other words, we are watching an instinctive routine with a spice of intelligence. How far are we warranted in saying that it is actuated by purpose? Can there be purpose which is not clearly perceived? We propose to rank all such cases under the rubric 'purposiveness'. It implies in the bird's case a determined endeavour, obedience to an inborn inspiration modified by intelligence, but we are not sure how far the end is in view.

Returning to the observations of Prof. J. B. Watson and Dr. K. S. Lashley on homing terns, we have to interpret such facts as these. A number of brooding terns are conveyed in hooded cages on board ship for over four hundred miles from the nesting island; they are liberated in the middle of the sea beyond all hint of land; they set off at once for home against a head wind; some of them reach home safely. How they succeeded we do not know; whether they are influenced by magnetic currents and the like we do not know;

but this we do know, that they are going back to their nests. The nesting impulse remains strong for two or three weeks, and this gives an illuminating significance to the homing of these sea-swallows. They are returning to activities in which their life reaches its climax, to the continuance of which they are urged by a deep organic impulse, by an irresistible will which is not readily baulked.

But difficulties increase when we pass to the field of purely or predominantly instinctive behaviour among animals 'of the little brain type', such as ants and bees. We see numerous acts dovetailed in a series, correlated in a definite sequence which leads to a useful result. We cannot make the behaviour intelligible without saying: "Somehow or other these several acts have been concatenated in relation to an end." But in what sense can we say that a bee on its first honey-collecting expedition is actuated by a purpose? We dare not suppose a conceived purpose and we cannot clearly think in this case of a perceived purpose, for the bee is operating effectively in a world previously unknown to it. What kind of purpose can there be? We shall speak of instinctive purposiveness, differing from perceptual purposefulness in the probable absence of any clear vision of the end.

Here we have to include the extraordinary cases where the individual works resolutely towards a goal which it never experiences. Many Digger-wasps, for instance, make elaborate preparations for offspring which they never survive to see. Since social wasps are geologically ancient it is reasonable to suppose that their behaviour originated in the distant past when the ancestors of our present-day species *did* survive to see their progeny. Originally, on this supposition, whether the primitive behaviour arose as an intelligent new de-

parture (as some would say) which was hereditarily added on to the instinctive patrimony of the race, or arose as a germinal mutation (as we would say) which was intelligently tested and approved of in the individual lifetime, it is not far-fetched to suppose that it was justified to the individual in some measure of satisfaction. The mothers saw their children, which is more than they do now.

The difficulty is to understand the present-day implicit obedience to the voice of the distant past, to see how an elaborate piece of instinctive routine which does not justify itself to its possessor can retain its imperious inertia through the ages. Probably some sop unknown to us is given to the individual's interests and satisfactions. It may be, for instance, that parental instincts have become in some cases linked on to conjugal instincts, reverberations of which continue to give meaning and interest to parental care whose reward is nowadays never experienced. But the problem of making for an unseen goal is a very difficult one.

Since this was written our suggestion of an individual 'sop' has been strikingly confirmed by the observations of Roubaud and of Wheeler. For certain tropical wasps Roubaud has shown that the queens and workers receive from the grubs, which they assiduously tend and feed, small quantities of a secreted elixir of which they are extraordinarily fond. For certain kinds of ants Wheeler has shown that there is a similar give and take (trophallaxis) between the workers and the grubs. The workers feed the grubs with chewed flesh, but they receive from their charges a *douceur* of secretion which seems to keep them in good heart.

But we cannot draw a line at instinctive creatures like ants and bees, where the complexity of the brain gives us some warrant for postulating ideational processes. There

is hardly less effective purposelike behaviour in animals with no nerve-ganglia at all. Our typical case, already described, is the struggle between the brainless starfish and the brainless sea-urchin. Here we have a long series of difficult operations, not in the line of least resistance, not habitual, not a sequence of tropisms or reflexes, but a correlated behaviour-chain. Can we avoid saying that the starfish shows endeavour? We do not dream of calling it purposeful, but is it in any way purposive? We have to remember that the starfish has no nerve-ganglia. It has diffusely scattered neurons, a line of them up each arm, and a pentagon uniting these lines around the mouth. But there is no concentration into ganglia, and therefore we must be very parsimonious in our use of mental terms. We propose to speak of this sort of purposelike behaviour as illustrating *organic purposiveness*, organised endeavour.

Summing up to this point, we find that a modicum of purpose or intention is to be recognised over a very wide range, that it is a *vera causa* that counts, that we are not at liberty to take it or leave it, that it must enter into the scientific description. It probably represents in all cases an organismal summarising of past experiences in such a way that a definite endeavour is engendered, and behaviour is effectively dominated. But it tends to clearness to distinguish conceptual purposefulness in man's conduct, perceptual purposefulness in the intelligent behaviour of man and some animals, instinctive purposiveness in the routine behaviour of ants and bees, and organic purposiveness in the controlled and experimental endeavours of brainless animals,—even in the architectural achievements of the arenaceous Foraminifera.

We began with deliberate purposefulness and worked

downwards; but deliberate purposefulness is a lofty specialisation of organic purposiveness. Without implying too hard and fast boundary lines, we suggest that the word purposeful be kept for actions in which there is conscious anticipation of the constraining end. The common note in purposeful or purposive behaviour is that of the individuality or total reaction of the organism. When the organism as a whole works towards a future result which is not immediate, there is purpose in some form or other. Where the concept of purpose or intention is applied beyond the category of individuality there is bound to be confusion of thought, and care must be taken not to use it to denote the end which a particular collocation subserves or the utility which any particular collocation may have in the economy of Nature.

§ 6. *The Purposelikeness of the Ordinary Functioning of the Body is Covered by the Concept of Adaptation.*

The organism's behaviour as a whole is fundamentally purposelike. It makes for self-preservation and race-preservation in the widest sense. It may, on occasions, exhibit self-determination, selection, and control with reference to a distant result. In higher animals, purpose probably operates, as in man, as a cognitive anticipation of the future; in lower animals the nervous system is so different that we dare not argue from analogy as to the degree of awareness with which the conative bow is bent.

It appears probable that activities originally dominated by clearly perceived purpose, may, by individual habituation or by germinal variation, sink to a lower level of organised purposiveness. Not only the bending of the conative bow, but the hitting of the mark, becomes part of the organisation, it may be part of the inheritance, part of the

organism's ready-made self. The organism as a whole hardly requires to keep its hand on the reins, purpose has become implicit. There are disadvantages in this, for the fixity sometimes leads to quaint mistakes, but it spells economy and allows more freedom for direct or individual purposive or purposeful endeavours and experiments. Just as we need the uniformity of the inorganic domain as a reliable fulcrum for our efforts, so the uniformity of organised or implicit purposiveness, besides saving organismal energy, may serve as a trustworthy stepping-stone to higher things.

When we observe an intricate machine with many regulative adjustments, such as safety-valves, we are impressed with its efficiency and purposelikeness. But we credit its maker with purpose, not itself; the concept does not grip. It is a confusion of thought to speak of a torpedo or a solar system being actuated by purpose. Only an organism or a higher form of Being can have a purpose.

Similarly in regard to the smooth working of the organs of a complex animal and even the orderly development of the same we are inclined to say that the appropriate term is adaptive not purposive. The concept of adaptation suffices for the fact that in ordinary functioning "the whole and the parts are, *as it were*, reciprocally ends to each other". The harmonious functioning and development are the outcome of an organisation gradually wrought out through ages and are exhibited whenever suitable liberating stimuli are present. We need not here introduce the concept of actuating purpose in any form.

But it seems legitimate to lay emphasis on the view which we have tried to substantiate that the adaptive organisation did not come about mechanically, that it has behind it a long history in which germinal variability and organic pur-

posiveness have played an important part, and that even when it may be said that variability shuffles the cards blindly, it is incumbent on the individual to play the game intelligently if it means to win.

Moreover, in the regulatory self-adjustment of the organism when functioning or development has been badly disturbed, in the activity, within the body, of independent mobile elements like phagocytes, in the regeneration of a lost lens from a tissue which does not normally give rise to one, we get just a glimpse of a residual organic purposiveness, though that has been as a whole resigned in favour of very perfect and thoroughgoing organisation.

What is meant by saying that the organism is essentially purposive, or that it has an essentially teleological or finalist aspect? This is meant, that the whole life expresses a tendency to persist, that the whole life is adapted towards self-preservation and self-expression. And if it be said that this adaptedness is the outcome of ages of mechanical variation and selection, the answer is that neither variation nor selection can be adequately described as mechanical.

§ 7. *Provisional Conclusion and Anticipation.*

We have been necessarily much concerned with the outworks, and there remain many imperfectly answered questions. What, in the world-becoming as a whole, is the significance in the largest sense of the inorganic domain in its intricacy and splendour, of the myriads of invisible Protists, of the hundreds of thousands of plants, of the struggle for existence, of the prodigious mortality, of the age-long genetic process with all its groaning and travailing? To such questions we shall return in our study of Organic Evolution, conscious that behind them there loom others—If Nature be Nature

for a purpose, what is that purpose? If there be design what does it promise?

The general outcome of the present discussion is an appreciation not only of the pervasiveness of mentality in the realm of organisms, but of all-penetrating purpose as well. Looking back imaginatively on the course of evolution, we have seen the emergence of an aspect of reality which we call Life, and another aspect of reality which we call Mind, now we are getting glimpses of the emergence of another aspect of reality which we call Purpose. Of this we shall get a larger view when we come to consider the evolutionary process as a whole.

In the meantime, however, we have gained something. For while there may be difference of opinion as to terms and concepts, it has become increasingly clear that animals, and plants too, are creatures with purposeful or purposive lives, and are not to be banished from the Realm of Ends. This enriches our conception of life. It is a contribution towards a Philosophy of Nature. It makes our view of Nature and our view of Human Life more conformable.

In any case we trust that our study so far may have contributed to a deeper appreciation of the Realm of Organisms, in which we are, to say the least, no aliens. We have sought to envisage the variety of life—hundreds of thousands of distinct individualities or species; the abundance of life,—like a river always tending to overflow its banks; the diffusion of life,—exploring and exploiting every corner of land and sea; the insurgence of life,—self-assertive, persistent, defiant, continually achieving the apparently impossible; the cyclical development of life,—ever passing from birth, through love, to death; the intricacy of life,—every cell a microcosm; the subtlety of life,—every drop of blood an

index of idiosyncrasies; the inter-relatedness of life,—with myriad threads woven in a patterned web; the drama of life,—plot within plot, age after age, with every conceivable illustration of the twin motives of hunger and love; the flux of life,—even under our short-lived eyes; the progress of life,—slowly creeping upwards through unthinkable time, expressing itself in ever nobler forms; the beauty of life,—every finished organism an artistic harmony; the morality of life,—spending itself to the death for other than individual ends; the mentality of life,—sometimes quietly dreaming, sometimes sleep-walking, sometimes widely-awake; and the victory of life,—subduing material things to its will, and in its highest reaches controlling itself towards an increasing purpose.

It is something to have found warrant for regarding the Realm of Organisms as pervaded with active purposiveness. At a later stage in the argument we shall show that there is at least a presumption in favour of the view that Nature is Nature for a purpose—an increasing and transcendent purpose. At this stage it seems as if part of that purpose were the emergence of individuality, mind, freedom, purpose. This thrilling word purpose, expressing the most real fact in our personal experience, brings us at this half-way house to our provisional conclusion which is, we confess, too large for the premises, that individualities with mind, with freedom, and with purpose, cannot be accounted for in terms of a ground of reality without mind, without freedom, without purpose. Therefore let us humbly seek after, if haply we may find, more than the footprints of the Creator, who beholding all the works of His hands found them good for His purpose.

SUMMARY.

Our consideration of the realm of organisms has shown us the apartness of living creatures and how they transcend mechanical and dynamical formulation, the important rôle played by behaviour with a definitely mental aspect, the pervasiveness of beauty, and the large proportion of time and energy devoted to activities which make not for self-preservation but for race-welfare. We find, in fact, in *Animate Nature* far-reaching correspondences to our ideals of the True, the Beautiful, and the Good,—which suggest a rehabilitation of Natural Theology.

Taking a wide sweep we gain another great impression—that of almost universal adaptiveness. Every living creature is a bundle of adaptations. It matters comparatively little that we are to some extent able to describe the process by which these adaptations have arisen (the imperfections of this description to be considered later), for the basal fact remains that living creatures have had the capacity of evolving thus adaptively. The adaptiveness depends on intrinsic qualities, previously discussed, which are more striking than ready-made fitnesses.

Adaptations may be classified as:—(1) structural arrangements with internal or external reference, (2) co-ordinating functional adjustments of a special sort, including regulatory integrations, and (3) inter-organismal adaptations. The result of the last is a systematisation or co-ordination of lives, world-wide in its scope, and often extraordinarily subtle in its accomplishment.

In the inorganic domain we find rigorous concatenation, a dominance of mechanical necessitation. There are no unique individualities, no alternatives; and the concept of purpose is irrelevant (except when we are thinking of the significance of the evolutionary trend as a whole). On the other hand, in the human realm of ends, ideal anticipations are dominant. Our conduct implies purposeful self-determination. There is no difficulty until we begin to consider the realm of organisms,—between the inorganic and the human.

It may be said that the organism as a whole is characteristically purposive,—“a unity in which the whole and the parts are reciprocally ends to each other”. It shows some measure of self-determination; its behaviour is regulatory, selective, controlled; the activities of its parts are correlated in reference to the preservation and continuance of the individual and the race. The development

is also purposive through and through. And if it be said that in all this the organism is merely obeying its hereditary constitution adapted to react to an appropriate environment, it must be observed that this hereditary constitution is determined by the selection of variations, many of which seem like experiments in self-expression, and that all the innate variations are, so to speak, cards which have to be played by organismal endeavour. This endeavour is *ipso facto* purposive and is along the lines of previous play in some measure selected by the organism.

Passing above what may be called organised purposiveness, we may recognise instinctive purposiveness, often with its paradoxical quality of making towards a goal which the individual never experiences. At a higher level, among intelligent animals, it becomes possible to speak of a perceived purpose—an imaging of the end which has compelling force. Thus we are led to an appreciation not only of the pervasiveness of mentality in the realm of organisms, but of the all-penetrating purposiveness as well.

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